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August Groundbreaking Is Set For New Plant Sciences Complex

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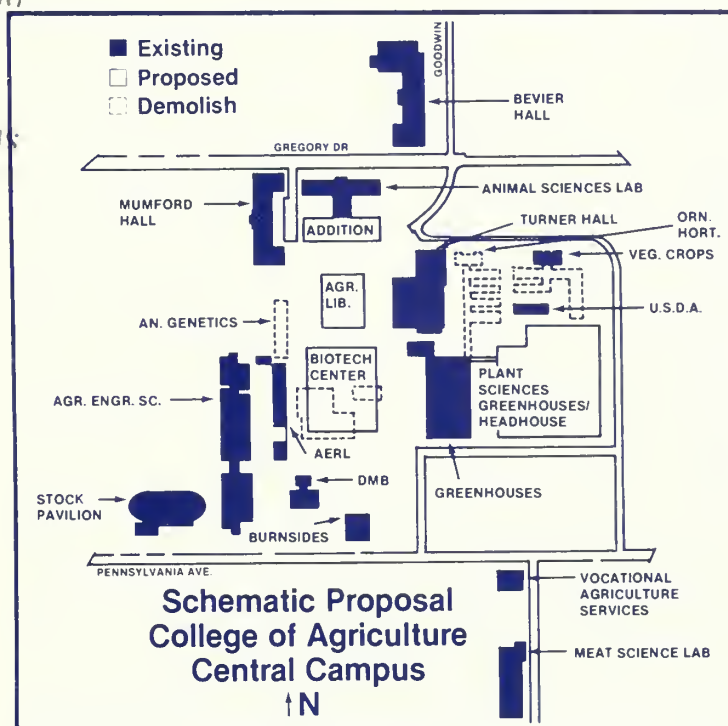
UNIVERSITY OF ILLINOIS

Plant science research in four UI departments will soon receive an added boost with the construction of a major new Food for Century III project on campus. Groundbreaking for the \$10.116 million Plant Sciences Greenhouses/Headhouse complex is scheduled for mid-August, with a completion date of late summer, 1987. The new facility will provide environmentally-controlled greenhouses, laboratories, and support areas for the Departments of Forestry, Horticulture, Plant Biology, and Plant Pathology. The complex also is expected to boost interdisciplinary and multidisciplinary research in the plant sciences, including work in genetic engineering and related biotechnology areas.

The project will include a multi-purpose headhouse of approximately 19,000 net assignable square feet (NASF) and modern, aluminum-framed greenhouses totaling 41,000 NASF. The headhouse will incorporate specialized laboratory facilities for plant metabolic studies, tissue culture growth and transfer, whole plant physiology, plant materials, tree physiology, soil microbiology, and landscape design. One section of the headhouse will contain environmental chambers, which are essential for many basic studies in the plant sciences. Additional headhouse space will be allocated to the Department of Horticulture for faculty and administrative offices. Other headhouse features will include such support areas as conference rooms, technician and graduate student offices, computer facilities, and preparation rooms for soil and plant materials.

The new greenhouses/headhouse complex will be centrally located adjacent to existing Turner Hall greenhouses, facilitating greater operating efficiency and increased interchange among user departments and programs. The various greenhouse units will incorporate high-intensity lighting, isolation areas, and automatic temperature and environmental-control devices to enhance and accelerate experimentation.

The overall project will eventually involve razing of the present Ornamental Horticulture Building on Dornier Drive, as well as several adjacent greenhouses that are in poor physical repair. The planned location of the new Plant Sciences Greenhouses/Headhouse complex is identified in a schematic map of the proposed central agriculture campus elsewhere on this page.



New Agriculture Library and Information Center Planned

College of Agriculture alumni leaders have announced plans to seek private funding support for the construction of a new Agriculture Library and Information Center on the Urbana-Champaign campus. The proposed new facility, which was originally conceived as an integral part of the Food for Century III capital program for food-production research, would contain approximately 100,000 square feet of space — more than 13 times the size of the current Agriculture Library in Mumford Hall. It would be centrally located in the proposed College of Agriculture building complex just south of the planned Animal Sciences Laboratory addition. Estimated cost of the new library is \$10-12 million.

According to Agriculture Librarian Carol Boast, the proposed library facility would provide a broad range of essential information services and serve as a repository for and disseminator of agricultural information for users in Illinois, the nation, and the world. It would contain sufficient space for 300,000 volumes, various types of seating and study areas, and classrooms for teaching agricultural information management and use.

Other planned features would include advanced technology equipment for searching national bibliographic and full-text databases; individual carrels equipped with audio-video units and computers for interactive instruction; and additional state-of-the-art technology for staff use in agricultural information storage, retrieval, and dissemination. Users also would have ready access to the many information resources of the National Agriculture Library, including publications and database materials.

The present Agriculture Library is severely hampered by its small size, outmoded physical plant, and restrictive location and is therefore considered wholly inadequate to meet current or anticipated information needs of the College. The 7,800-square-foot library currently houses a maximum of 70,000 volumes, with the remainder of the College's 200,000 volume collection kept in the stacks of the University's graduate library.

Seating capacity of the present Agriculture Library is fewer than 50, despite the fact that faculty and student numbers in the College now total more than 3,200. Other problems associated with the present library's physical plant include narrow aisles, lack of accessibility for wheel chairs, ceilings in the stacks that are too low for persons above average height, and the unavailability of space for future expansion.

In addition to consolidating the Agriculture Library's information resources in one location and providing for future expansion, the proposed new building would permit several of the College's major information and communications activities to be brought together in a powerful agricultural communications network. Current plans call for the new facility to house the College's Agricultural Alumni and Development Offices, an expanded Microcomputer Teaching Laboratory, and a Computer Services Office which would include space and an appropriate environment for supercomputer use. Also planned are new quarters for the College's Office of Agricultural Communications, which is currently housed in the basement level of Mumford Hall.

Two committees have recently been organized to facilitate planning and development of the new library. William L. George, associate dean and director of resident instruction, is heading an *ad hoc* committee to develop a comprehensive program statement in conjunction with the College's Library Committee and representatives of other major administrative units in the College. Lynette L. Marshall, director of resource development for the College, is working with alumni leaders Fred Hoppin, John Rundquist, and others to establish a fund-raising committee and to devise appropriate fund-raising strategies. Funding efforts are expected to move forward following submission of the program statement and fund-raising strategy to campus and University of Illinois Foundation officials for formal approval.

Agriculture alumni leaders view the library construction project as a privately funded continuation of the Food for Century III initiative, which is scheduled to be terminated following the FY 1987 capital request. The Agriculture Library and Information Center was originally proposed as a publicly funded Food for Century III project in 1976 and was identified as an Agricultural Resources Center at that time.

College Telemarketing Effort Aids Fundraising

The College of Agriculture's first telemarketing effort has resulted in more than \$77,000 in verbal pledges from 1,400 College alumni. The overall pledge rate of 19 percent was an outstanding response from those alumni contacted, most of whom were previously non-givers.

The College of Agriculture also has received two \$50,000 gifts from corporations with a long-standing history of support for the College. Pioneer Hi-Bred International, Inc. has contributed \$50,000 in honor of a former president of their Illinois-Wisconsin Division, Hugh P. Morrison. Teaching, research, and public service programs in the area of agricultural finance will benefit from the second \$50,000 gift. In this instance, the corporate donor prefers to remain anonymous.

Proposed Animal Sciences Facility Moves Closer to Reality

Planned construction of an ultra-modern physical plant that would house many of the College's animal science programs in a single location is gradually moving closer to reality. College and University administrators are optimistic regarding the development of a proposed \$17.363 million Animal Sciences Laboratory Addition and Remodeling, which would be located in the central agriculture campus just east of Mumford Hall.

Planning monies for the new facility, which would house the newly organized Department of Animal Sciences, were approved in the University's Food for Century III capital budget for FY 1986 and recently received legislative approval in Springfield. Funds for the proposed remodeling, new construction, building utilities, and equipment are being sought in the upcoming FY 1987 University budget request, which goes to The University of Illinois Board of Trustees for approval later in the year. The project is likely to be the final one funded under the Food for Century III capital program for food-production research, which is scheduled to be terminated after FY 1987.

The proposed Animal Sciences Laboratory Addition and Remodeling would include modern research laboratories, faculty and administrative offices, classrooms, and support facilities in the areas of environmental physiology and behavior, reproductive physiology, animal genetics, nutrition and management, microbiology, biochemistry, and immunology. Instructional laboratories also would be available for teaching in animal physiology, biochemistry, and special problems.

Specialized support facilities in the building would include coldrooms, freezers, a tissue culture room, and various environmental chambers. Additional space is planned for small and large animal surgery, animal preparation and holding, quarters for animal caretakers, and storage of feed and laboratory supplies.

The proposed FFC III project would provide 84,000 net assignable square feet (NASF) of space for UI animal agriculture programs. The addition would be located

adjacent to the existing Animal Sciences Laboratory and would contain approximately 38,000 NASF, including some of the most sophisticated laboratory space in the project. The balance of available space (46,000 NASF) would be contained in the remodeled Animal Sciences Laboratory, which was originally constructed in 1952 and is now in need of updating to meet current and anticipated research needs.

Classrooms and administrative offices for the newly organized Department of Animal Sciences would be centrally located on the ground level of the five-level building complex, facilitating access by students and the general public. To be included in the planned construction would be three classrooms, with seating capacities of 60, 120, and 250 persons. Energy efficiency would be incorporated throughout the project, with all laboratories, offices, classrooms, and support areas heated/air-conditioned for year-round use.

Animal agriculture programs in the College of Agriculture have been divided between two departments (the Departments of Animal Science and Dairy Science) and housed in five campus buildings for many years. These programs also have experienced a substantial shortfall in available space. In order to alleviate chronic space problems and to facilitate interdisciplinary or multidisciplinary research efforts within the program, comprehensive plans have been developed to consolidate both the physical facilities and the administrative structure of the two departments.

In 1984, plans were finalized to merge the Department of Animal Science and the Department of Dairy Science into a single Department of Animal Sciences. Those plans have since been approved by the departments involved, the College of Agriculture, the Urbana-Champaign Senate, the University Senates Council, and The University of Illinois Board of Trustees. A national search has been completed for the head of the new department; and that position has now been accepted by W. R. Gomes, current head of the UI Department of Dairy Science.

The newly formed Department of Animal Sciences was formally approved by the Illinois Board of Higher Education on June 4, 1985. The merged faculties will now integrate and coordinate their efforts to organize a more efficient unit for animal research, teaching, and public service. According to Gomes, construction of the proposed animal sciences complex would enable researchers to better coordinate their work in such critical areas as animal genetic evaluation and improvement; biotechnological applications in embryo transfer and manipulation; animal nutrition, behavior, and performance; and uses of farm automation, robotics, and expert systems in livestock production.

News items and other articles of interest to the College of Agriculture are solicited on a continuing basis. Submit all materials for possible inclusion in upcoming issues of AgriView to Joanne Courson, Office of the Dean, 101 Mumford Hall. Items may be edited for reasons of space and consistency.

Campbell's Comments

by John R. Campbell, Dean



Faculty activities, honors, and professional achievements reflect the exceptionally high caliber of the College's academic staff, as do the many outstanding educational and research programs that are developed in fulfillment of our land-grant mission. The first and subsequent issues of *AgriView*, a new collegewide newsletter, are intended to communicate the College's commitment to professional excellence, via a periodic treatment of those major activities, programs, honors, and events that help mould our institutional and professional stature.

This first issue of *AgriView* also reflects exciting, and indeed challenging, prospects for institutional change within the College—positive and forward-looking change, we believe, in the form of new programs, new or proposed physical facilities, new administrative appointments, and departmental reorganizations. The prospects of realizing several new capital projects on the central agriculture campus, as mentioned elsewhere in this issue, go hand-in-hand with the College's ongoing commitment to its faculty and staff—that of enhancing professional capabilities and physical resources to meet the complex needs of our society.

William D. Cupps, Office of Agricultural Communications, will serve as editor of *AgriView*, which will be published periodically throughout the academic year. We hope that the format of *AgriView* is appealing and the content is informative to our readership. Above all, we welcome your input of news items, comments, and suggestions that will enhance the quality of future issues of this, *your* publication.

Proposed UI Biotechnology Center Wins Strong Congressional Support

Proposed construction of a world-class biotechnology center on the central agriculture campus received an added impetus on March 7 with the unanimous approval of \$3 million in planning monies by the U.S. House Agriculture Committee. Funding approval for the federally-sponsored project is now pending in the House Appropriations Committee, with further action awaiting Congressional approval of the federal budget for the upcoming fiscal year.

The proposed \$30 million facility would house an estimated 125 UI researchers working in various biotechnology areas relating to the plant and animal sciences, including molecular genetics, recombinant DNA techniques, rapid plant propagation, tissue culture, and

the production of monoclonal antibodies. An additional 40 U.S. Department of Agriculture researchers now on campus also would be housed in the building, which would be funded under a special sponsorship arrangement with the U.S. Department of Agriculture.

The biotech center would contain approximately 100,000 net assignable square feet of space, making it the largest building on the Urbana-Champaign campus. It would incorporate a number of highly specialized laboratories and support areas, including a plant/animal/microbe containment facility where genetic manipulation and recombinant DNA studies could be safely conducted under controlled environmental conditions. Also tentatively planned are laboratory areas for large-scale tissue culture and plant propagation work.

"The prognosis for receiving Congressional approval of planning monies for the center during FY 1986 or FY 1987 is cautiously optimistic," said UI Agricultural Experiment Station director Donald A. Holt, who has spearheaded efforts to fund the biotech project. If the \$3 million planning appropriation wins Congressional approval, the design phase for the new building would require approximately one year to complete. At that time, a second federal appropriation of \$30 million would be required to fund actual construction of the project. The new biotech center would take an estimated two to three years to complete.

Congressional supporters for the \$30 million project have included U.S. Representatives Edward Madigan of Lincoln and Terry Bruce of Olney, both members of the House Agriculture Committee. Support also has come from Congressmen Richard Durbin of Springfield and George O'Brien of Joliet, members of the House Appropriations Committee. E. de la Garza, chairman of the House Agriculture Committee, and U.S. Senator Alan Dixon, a member of the Senate Agriculture Committee, endorsed the biotech center after visiting the Urbana-Champaign campus last October.

Tentative plans call for the USDA-sponsored building to be located in the vicinity of the old Agricultural Engineering Building, which would be razed to make way for the project. This proposed site also would be near that of two planned or ongoing Food for Century III capital projects: the new \$10.116 million Plant Sciences Greenhouses/Headhouse complex, which will be under construction later this year; and the proposed \$17.363 million Animal Sciences Laboratory Addition/Remodeling, which recently received approval of a \$1 million planning appropriation in the Illinois legislature.

"The sophisticated nature of laboratory and support facilities available in the proposed biotech center, along with its centralized location, would greatly enhance interdisciplinary research involving biotechnology and genetic engineering techniques," Holt said. An underground tunnel system also is being considered, which would link the various research facilities in the central agriculture campus and promote greater interchange and collaborative work among agricultural scientists and others.

Developmental Activities In the Agricultural Experiment Station

The UI Agricultural Experiment Station currently has several important projects underway to help provide more program support and better facilities for all agricultural scientists at the University of Illinois. Some of these ongoing projects are as follows:

- Providing information, documents, and other activities in support of political efforts to obtain the proposed USDA-funded Biotechnology Center on campus.
- Developing and promoting a major Farming Systems Project, an umbrella project encompassing a number of different proposed agricultural research and extension efforts.
- Developing and promoting a proposal for line-item support of applied agricultural research in Illinois.
- Developing a proposal for computerizing the operations of the UI College of Agriculture, in the context of serving a computerized Illinois agriculture.
- Cultivating various regional and national projects that are likely to provide resources for University of Illinois research efforts.
- Informing Campus, University, higher education, and government officials on the need and opportunity for agricultural research and development, as well as promoting specific research initiatives that need to be undertaken in the UI College of Agriculture.

The Farming Systems Project represents an important new thrust which, hopefully, will receive state funding support during FY 1986. With this initial support, the Station will hire a full-time manager, implement a large economic input-output computer model of the target area, assemble a management committee, and begin to develop specific R & D strategies to alleviate the critical economic situation in southern and western Illinois. As planned, the project will provide substantial amounts of resources in each of at least 18 different research areas, so that rapid progress can be made.

According to Donald A. Holt, director of the Station, the problem will be approached from a large-scale perspective, making sure that what is developed and recommended are compatible with large-scale trends in international agriculture. Among other goals, the Farming Systems Project is designed to demonstrate what can be done when a number of outstanding agricultural scientists, cooperating with informed citizens, attack a problem with the systems approach, modern computer resources, and adequate funding. Agricultural scientists also will have an opportunity to see if their research fits under the umbrella of the Farming Systems Project.

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Extension's Rural Route Program Focuses on Farm Financial Crisis



Call 1-800-847-6883

Rural Route, the stellar program of the UI Cooperative Extension Service this spring, has become almost a household term in farm homes throughout the state. The program captured the attention of both state and farm media when it opened March 1 and has directly touched the lives of more than 1200 farm families since then.

About half of the early calls to the confidential hotline telephone number focused on debt restructuring and getting operating money for the 1985 cropping season. Each caller was asked a few basic questions to determine the situation and its urgency, and was then referred to one of the two Rural Route centers (one at Macomb, the other at Benton), to an Extension adviser in the area, or to a state specialist on campus.

In most cases, the callers and the counselors assigned to them—all Extension advisers who had undergone extensive training in financial management and counseling—spent several hours together developing records, analyzing them, and exploring the farm family's alternatives.

"Advisers answering the phones and those doing the counseling quickly learned that no two calls were the same. Each required an individual approach often influenced by the individual's stress level, and the stress on other family members, as much as by the financial situation," says Peter D. Bloome, assistant director of the UI Cooperative Extension Service.

Bloome and Extension agricultural economist Richard P. Kesler are co-leaders of the project that was initially supported by an \$87,500 grant from the U.S. Department of Agriculture.

Bloome says that plans currently call for maintaining the telephone hotline number—1-800-847-6883—for callers who want confidential, one-on-one assistance. "But we're opening up the entire program on financial planning and management so we'll be able to reach an even larger number of Illinois farmers rather than just those at the crisis or near-crisis level."

"Our five focus areas will include the areas of farm management and profitability and family resource management, which center on individual farm families. But we'll also be networking with dislocated worker programs and programs to assist rural businesses, and we'll be working with community support efforts."

Bloome notes that by mid-July, nearly all of Extension's agricultural advisers will have gone through an intensive program to enable them to effectively counsel farm families. And many of the home economics advisers also will have been part of that training, so they can not only assist with the family financial matters, but will have a good understanding of what is happening with the farm business.

"Our intent is to work through mass media, through conferences and short courses, and through individual consultations to help assure that all who want help get

it. They should end up with a financial statement that is accurate, that they understand, and that they can use to make logical business decisions."

Bloome says many agricultural leaders believe that as many as 6,000 Illinois farm families will be forced out of agriculture during the next year. "If that happens, the greatest stress and the greatest need for an Extension response is yet to come."

"Extension can help Illinois farm families discover and deal with the realities of their situations, and we can help them identify their meaningful alternatives. But to do it, we have to start at the beginning, and for many families, developing good financial statements is the first step. We're ready to help make it happen."

Recent Developments Involving College Field Facilities

As part of the College's ongoing effort to strengthen its statewide field research and demonstration network, plans have been developed to acquire a 191-acre site directly south of the present Orr Agricultural Research and Demonstration Center for the purpose of establishing a new animal research unit. The proposed unit would be operated by the UI Department of Animal Sciences in conjunction with current agronomy operations at the Orr Center, which is located near Perry in Pike County. The land would accommodate a herd of approximately 100 to 150 beef cattle, which would be used for research in animal production, nutrition, and management as they relate to pasture and forage use.

An area steering committee has been formed to promote funding and development of the new research unit, and an option has been obtained to purchase the necessary land. Estimated cost of developing the new animal research unit is \$500,000, of which \$250,000 would be used for land acquisition and the remainder for site improvement and equipment.

Knowledge gained through animal research conducted at the site would be utilized to improve agricultural, environmental, and socio-economic conditions in western Illinois, in conjunction with a major Farming Systems Project to be undertaken by the UI Agricultural Experiment Station in the region.

Among other recent developments, horticultural research with both ornamentals and vegetable crops is now well underway at a 25-acre field site located near St. Charles in Kane County. Use of the land for research purposes was obtained under a long-term lease agreement with the Illinois Department of Corrections, which operates the Illinois Youth Center at St. Charles. Approximately \$80,000 has been allocated to develop a new storage and support facility at the site. Horticultural research activities are conducted in close cooperation with an area growers association, which also is providing funding support.

Faculty Awards and Honors

David H. Baker, professor of animal nutrition, was recently honored with the 1985 H. H. Mitchell Award for Excellence in Graduate Teaching and Research in the Department of Animal Science. The departmental award includes a \$1,000 honorarium. Baker has achieved international recognition for his studies in amino acid-protein nutrition.

Tom R. Carr, associate professor of animal science and extension meats specialist, is a recipient of the 1985 Distinguished Extension-Industry Service Award given by the American Meat Science Association. The award was presented at the association's 38th annual Reciprocal Meat Conference in Baton Rouge, La. on June 25.

Sara U. Douglas, assistant professor of textiles and apparel, has been selected as Outstanding Advisor in the School of Human Resources and Family Studies for two consecutive years, 1984 and 1985.

Harold D. Guither, professor of agricultural policy extension, was one of six individual recipients of the U.S. Department of Agriculture Superior Service Award for 1985. Presentation of the prestigious USDA award was made at a special ceremony in Washington, D.C. on June 19. Guither was cited for his many outstanding contributions to public policy research and Extension educational programs.

Richard H. Hageman, emeritus professor of plant physiology, was a recent winner of the Kenneth A. Spencer Award given by the Kansas City Section of the American Chemical Society. The award, which recognizes researchers who have made meritorious contributions to agricultural and food chemistry, includes a medal and honorarium of \$3,000.

Charles R. Henderson, George A. Miller visiting professor of animal science, has been elected to the prestigious National Academy of Sciences. Henderson, who is widely known for his work in animal breeding and genetics, previously won the Borden Award of the American Dairy Science Association, the Gold Medal of the German Society of Animal Science, and the Morrison Award of the American Society of Animal Science.

Michael F. Hutjens, professor of dairy science extension, was recently honored with the 1985 DeLaval Extension Dairyman Award for outstanding leadership in developing and implementing effective Extension dairy science programs. The \$1,000 award was presented at the 80th annual meeting of the American Dairy Science Association, held on the Urbana-Champaign campus in mid-June.

C. James Kaiser, associate professor of agronomy at the UI Dixon Springs Agricultural Center, was recently honored with the 1985 Merit Award of the American Forage and Grassland Council. Kaiser was recognized for his outstanding achievements in forage crops research.

Marshal D. McGlamery, professor of weed science extension, recently won the Alpha Zeta 1985 Outstanding Ag Instructor Award, which was presented at the Agronomy Banquet. McGlamery earlier received the prestigious Outstanding Teacher Award given by the Weed Science Society of America.

Darrell A. Miller, professor of plant breeding and genetics; **Constantin A. Rebeiz**, professor of plant physiology; and **John T. Scott, Jr.**, professor of production economics and farm management extension, were formally honored March 4 with the 1985 Paul A. Funk Recognition Award. The prestigious award is annually presented in recognition of outstanding faculty achievement and major contributions to agriculture through research, teaching, extension education, and public service. Each received a certificate of recognition and unrestricted personal award of \$2,000.

Douglas F. Parrett, assistant professor of animal science and extension beef specialist, received the 1985 Younger Animal Scientist Award for Teaching from the Midwest Section of the American Society of Animal Science. Parrett was nominated for the teaching award by fellow UI faculty members and was selected from among nominees in a twelve-state region.

Samuel F. Ridlen, professor of poultry extension, was recently honored with the 1985 G. R. Carlisle Award for Excellence in Extension Teaching. The departmental award, which includes a \$1,000 honorarium, is presented in recognition of outstanding Extension teaching and educational programs in an animal science field. Ridlen also received the award in 1978.

Willard J. Visek, professor of nutrition, is a recipient of the Osborne and Mendel Award for his outstanding research in ammonia metabolism. The award is presented by the Nutrition Foundation of the American Institute of Nutrition.

Donald G. White, associate professor of plant pathology, received the 1985 UIUC Excellence in Off-Campus Teaching Award in recognition of his outstanding contributions to extramural teaching programs conducted throughout the state.

Faculty Activities

Hilda M. Buckley, assistant professor of textiles and clothing, has been elected President of the Association of College Professors of Textiles and Clothing, Central Region. Buckley also has been named to the national ACPTC futures committee, a nine-member group responsible for studying and recommending future directions for the field of textiles and clothing.

Allison Carll-White, assistant professor of interior design, has been selected as the Attingham Grant-in-Aid recipient for 1985. The educational grant is funded by the Educational Foundation of the American Society of Interior Design. Carll-White will study in England for three weeks this summer, concentrating on the historical manor houses found in that country.

Harold D. Guither, professor of agricultural policy extension, and **Robert G. F. Spitze**, professor of agricultural policy, have recently conducted major research studies focusing on the preferences of various farm and nonfarm interest groups regarding 1985 agricultural and food policy. Systematic surveys were made of more than 450 leaders of prominent national interest groups, a sampling of 500 local Illinois agribusinesses, and a cross-section of 8,000 farmers in 17 states. Information compiled and analyzed in these studies was widely disseminated to Congressional members, government officials, members of interest groups, national media, and others, providing valuable input for decision-makers who are currently developing a new 1985 Agriculture and Food Act. The UI studies were the first comprehensive research efforts of their kind.

Sorab P. Mistry, professor of biochemistry, has been invited to present lectures and seminars on metabolic regulation at the Swiss Federal Institute of Technology during June. The institute is located in Zurich, Switzerland.

Jan E. Novakofski, assistant professor of meat science, and **Peter J. Bechtel**, associate professor of muscle biology, have recently developed a model to examine the effects of elevated growth hormone in animals by using a cultured pituitary cell line. Growth in the model was dramatic, with laboratory animals reaching twice normal weight in two months. The model has shown that growth hormones not only stimulate growth, but also has considerable potential to repartition nutrient intake away from fat deposition and towards building increased muscle mass. At a recent meeting of Federation of American Societies of Experimental Biology, the UI meat scientists presented four abstracts on experiments using the model to address questions on animal muscle growth, efficiency, and pathology.

Errol D. Rodda, professor of agricultural and food engineering, has been named team leader for a four-year, \$15 million AID-funded project, "Transformation and Integration of the Provincial Agricultural Network," located at the Northwest Frontier Province Agricultural University in Peshawar, Pakistan. Other faculty members going on long-term international assignments with the TIPAN project include **Raymond G. Cragle**, professor of dairy science; and **R. William Seiders**, assistant professor and 4-H program leader with the UI Cooperative Extension Service. Cragle will serve as a research program specialist and Seiders will be an outreach specialist with the TIPAN project, which is designed to expand the Pakistan university's institutional capability in agricultural research, education, and extension outreach.

Gary L. Rolfe, professor and head of the Department of Forestry, has been elected chairman of the newly created Illinois Commission on Forestry Development. Long-term objectives of the new commission include determining ways to increase forest productivity in Illinois, helping private landowners implement sound forestry practices, and making recommendations to the Illinois legislature regarding laws that will aid landowners in developing and maintaining forest lands. Creation of the commission was a direct outgrowth of the new Illinois Forestry Development Act, which went into effect in 1983.

Lawrence E. Schrader, professor and head of the Department of Agronomy, has been elected chairman of the Production Research Advisory Panel of the American Soybean Association for 1986. The advisory panel reviews research proposals submitted to the association. Schrader has served as a panel member for the past two years.

Michael P. Sherman, assistant professor of interior design, is the recipient of a three-year, \$100,000 grant from the Eileen Andrew Foundation. The multi-year grant will be used to establish a computer laboratory for teaching computer-aided design (CAD) to SHRFS interior design students. In addition, Sherman has received a \$150,000 computer through the University of Illinois-IBM EXCEL project.

James B. Sinclair, professor of international plant pathology and INTSOY, is co-author of a new book entitled **Basic Plant Pathology Methods**, which will be published by CRC Press this summer. Sinclair collaborated with Onkar D. Dhingra, professor of plant pathology at the Federal University of Vicosa, Brazil, in the new publication. Sinclair and Dhingra, who completed his Ph.D. degree at the University of Illinois in 1974, have co-authored three previous books.

Administrative Appointments

David B. Dickinson, professor of plant physiology, has been appointed acting head of the Department of Horticulture, replacing **Herbert J. Hopen** in that position. A national search for a permanent department head is currently underway. Hopen has accepted a new position as chairman of the Department of Horticulture at the University of Wisconsin-Madison.

James F. Evans, professor of agricultural communications, has been appointed acting head of the Office of Agricultural Communications. He succeeds **Delbert T. Dahl**, who left the OAC headship in February to become a communications education and marketing specialist with the UI Cooperative Extension Service. The present Offices of Agricultural Communications and Agricultural Publications are being merged with components of Agriculture Services and Vocational Agriculture Services to form a new Office of Agricultural Communications and Extension Education. Evans is heading up the reorganization effort, which hopefully will be ready for implementation at the beginning of the 1985-86 academic year.

W. Reginald Gomes, head of the UI Department of Dairy Science since 1981, has been appointed acting head of the newly organized Department of Animal Sciences. His appointment as permanent head of the new department will be recommended to The University of Illinois Board of Trustees for approval at their July 18 Board meeting. If approved, the permanent appointment would become effective on July 21, 1985. The Department of Animal Sciences will be composed of the merged faculties of the current Departments of Animal Science and Dairy Science. Final approval for the departmental merger and reorganization was obtained from the Illinois Board of Higher Education on June 4.

John J. Nicholaides, former coordinator of the Tropical Soils Research Program at North Carolina State University, has been appointed associate dean and director of the College's Office of International Agriculture. Nicholaides completed his Ph.D. in soil science at the University of Florida in 1973 and has been a faculty member of the Soil Science Department at North Carolina State since that time. He has been involved in numerous international consultancies and soil research programs and currently serves on the American Society of Agronomy board of directors, representing the international agronomy division. Nicholaides succeeds former director **William N. Thompson**, who retired in August, 1984.

Roscoe L. Pershing, former manager of engineering science at the Deere & Co. Technical Center, Moline, has been appointed head of the UI Department of Agri-

cultural Engineering. In his prior position, Pershing managed Deere & Co. research programs in engineering mechanics, engineering mathematics/computers, and engineering electronics and measurements. He completed his Ph.D. in agricultural engineering at the University of Illinois in 1966 and has been a Registered Professional Engineer in Illinois since 1970. Pershing has authored several SAE and ASAE technical papers and also holds three patents. He succeeds former department head **Roger R. Yoerger**, who retired May 31, 1985.

Lawrence E. Schrader, former professor of agronomy at the University of Wisconsin-Madison, was named head of the UI Department of Agronomy in January, 1985. He earned his Ph.D. in plant physiology at the University of Illinois in 1967 and joined the UW-M agronomy faculty in 1969. Schrader also served as chief of the USDA Competitive Research Grants Office in Washington, D.C. from 1980 to 1981. He succeeds former department head **Donald A. Holt**, who left the position to become associate dean and director of the Illinois Agricultural Experiment Station.

Coby B. Simerly, assistant dean of the College of Agriculture, has been appointed acting director of the School of Human Resources and Family Studies, effective August 21, 1985. She replaces **Marilyn M. Dunsing**, who will be taking a six-month sabbatical leave in England and will return in the spring semester as a faculty member in the Department of Family and Consumer Economics. **Jacqueline H. Anderson**, assistant professor of home economics, will assume Simerly's current position as assistant dean of the College for the 1985-86 academic year.

John L. Woods, head of the UNDP Asia and Pacific Programme for Development Training and Communication Planning, Bangkok, Thailand, since 1974, will become the new director of the International Program for Agricultural Knowledge Systems (INTERPAKS) effective in July. Woods has written and published widely on rural development, particularly from the perspective of agricultural communications and technology transfer. He previously headed a two-year project in Malawi and served as a consultant in India, Australia, Colombia, and Jordan. An East-West Center Fellow, Woods earlier worked as a development program specialist at the University of Illinois prior to completing his Ph.D. degree there in 1974. He replaces current INTERPAKS director **John B. Claar**, who will leave the administrative post to work on technical assistance programs and academic matters relating to extension.

AgriView

College of Agriculture/University of Illinois at Urbana-Champaign

Fall, 1985

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College EXCEL Projects Get Underway

Students enrolled in several agricultural and home economics curricula will soon be reaping the benefits of three IBM/EXCEL equipment grants awarded to College faculty members for the development of innovative, computer-assisted instructional programs. Resident faculty in agricultural engineering, agricultural economics, and interior design will utilize an array of sophisticated computer hardware provided under a \$12 million campuswide grant from the IBM Corporation to implement pilot instructional programs during the upcoming academic year.

The three College of Agriculture grants were among 51 approved campuswide during the first two years of the ambitious three-year project, which is aptly called "Excellence in Computer-Aided Education and Learning" (Project EXCEL). A campus steering committee coordinates the overall project and recommends instructional proposals to be funded under the competitive grants, with additional funding support provided from departmental, college, and campus sources. The long-range goal of Project EXCEL, which was formally established in August, 1984, is "to support imaginative educational uses of advanced computing technologies."

A two-year, \$102,000 EXCEL project centered in the Department of Agricultural Engineering will involve the application and use of computer graphics and computer-aided drafting techniques (CAD) to solve a broad spectrum of agricultural engineering problems. Principal investigator for the project, "Graphic Workstations for Teaching Agricultural Engineering," is **Marvin R. Paulsen**, associate professor of electrical power and processing. Co-investigators include **J. Kent Mitchell**, professor of soil and water; **Nelson L. Buck**, assistant professor of power and machinery; and **Richard C. Coddington**, associate professor of power and machinery.

A major objective of the pilot project, according to Paulsen, is "to educate students on innovative techniques of two- and three-dimensional graphic design and analysis of engineering problems unique to agriculture." Although very common in industry today, computer-aided design (CAD) is relatively new in higher education, especially in lower-level courses.

Initially, four graphic workstations will be available for the pilot project, incorporating IBM PC-AT microcomputers with high-resolution color monitors



Agricultural engineering professor Marvin Paulsen and research assistant Brad Whitehall (seated) examine an engineering graphics demonstration program at one of four new IBM graphic workstations obtained under Project EXCEL.

and printers. A video image processor, 3-D digitizer, and high-resolution graphics plotter will be linked to one or more of the multiple workstations, providing considerable flexibility in application and use. The new equipment also will have networking capability.

During the 1985-86 academic year, participating faculty members and support staff will utilize the new IBM hardware to evaluate existing graphic software and to develop specific instructional packages for the UI agricultural engineering curriculum. Applications software will be prepared for several advanced design and analysis courses, including those in soil and water conservation structures, land drainage, grain drying and handling, design of agricultural structures, environmental control for plants and animals, machinery design, and the dynamics of farm machinery elements.

Eight additional graphic workstations will be requested for the second year of the EXCEL project, at which time the various instructional packages will be incorporated in the existing agricultural engineering curriculum. The graphic workstations also will be available for software

development and instructional use by the Forestry and Food Science Departments, whose engineering components are housed in the Agricultural Engineering Sciences Building.

Faculty investigators anticipate that the pilot program will enhance and augment classroom learning for about 400 graduate and undergraduate students each year. In addition, the twelve workstations will be linked to the campus EXCEL 4381 computer via the Sytek cable. This feature will provide rapid access to specialized research data, permitting seniors and graduate students to write applications software or prepare other computerized materials for class presentation.

A two-year, \$105,000 EXCEL project involving faculty in the Department of Agricultural Economics will feature an interactive microcomputer network used to teach principles of agricultural marketing and information management. Principal investigator for the project—"A Pilot Investigation of the Uses of Microcomputer-Based Networks for Business Management and Market Simulation in Agriculture"—is **Michael A. Hudson**, assistant professor of livestock marketing. Co-investigators include **Steven T. Sonka**, professor of farm management and production economics; and **Raymond M. Leuthold**, professor of marketing.

According to Hudson, the project team will explore the diverse uses of computer simulations and networking techniques in three existing agricultural economics courses: "Livestock Marketing," "Commodity Futures Markets and Trading," and "Computers in Agriculture." Instructional applications of the network system will be introduced during both the first and second years of the EXCEL project. When fully operational, the network system will be used to instruct nearly 600 students annually.

Ten interactive workstations have been installed in the College's Microcomputer Laboratory, incorporating IBM-PC microcomputers with enhanced color displays and both graphic and mathematical adapters. An IBM PC-AT is employed as a server and is also linked to a nearby color printer. Acquisition of additional workstations is planned for the second year of the EXCEL project.



Agricultural economics professors Steven Sonka, Raymond Leuthold, and Michael Hudson (front, l. to r.) are shown with their newly installed IBM/EXCEL computer network. Graduate research assistants Clark Roberts and Brian Adam (rear, l. to r.) also are members of the project team.

Marketing students will utilize the EXCEL computer network for an interactive market simulation—buying and selling livestock or meat commodities through a computerized "auction." Participating students will gain valuable "hands on" experience in such concepts as price discovery, market interaction, and the dynamics of the buying and selling process.

Students in commodity futures trading will employ on-line, "real-time" market simulations to better understand the impacts of market information on prices, choices among risk-management tools, and the timing of price risk-management decisions under uncertain conditions. Network users also will be able to experience marketing data and trends over a period of several years, enhancing their ability to recognize how prices evolve as supply and demand conditions change.

The EXCEL network will be used extensively to teach fundamental principles of information acquisition, management, and processing in an agribusiness environment. Students enrolled in "Microcomputers in Agriculture" will access external data bases as a means of acquiring specialized information and will participate in group projects involving agricultural applications of that data.

"Learning the capabilities of microcomputers as communications, data gathering, and data processing tools," Hudson emphasized, "will better prepare today's students for careers in the modern world of agribusiness management."

A \$150,000 EXCEL grant awarded to **Michael P. Sherman**, assistant professor of interior design, will support the development of a pilot teaching program in computer-aided interior design (CAD).

"Computer-Aided Design Stations in the Interior Design Program" will introduce the latest in computer graphics technology to the UI interior design program. Students enrolled in the pilot CAD class will utilize two independent workstations with touch-sensitive high-resolution monitors. The "Fast Draft" CAD system is served by an IBM minicomputer.

The new equipment, which is housed in Sherman's interior design laboratory in Bevier Hall, will be used to work on a broad range of interior design problems involving residential and commercial environments. The "Fast Draft" CAD system will permit student designers working at the two stations to develop or analyze individual designs simultaneously, Sherman said.

Plotter-generated designs will be saved on a weekly basis during the course, enabling Sherman to determine students' progress in employing accepted interior design and space-planning theories in their work. Participating students also will regularly complete questionnaires to ascertain their attitudes toward CAD, computer technology, and their overall progress in the pilot class.

According to Sherman, the new CAD course will be developed during the coming year and tested in the fall semester, 1986. In addition to the EXCEL equipment grant, Sherman has received nearly \$150,000 in other external and campus support to establish a state-of-the-art CAD program for UI interior design students. This includes a three-year grant of more than \$100,000 recently awarded by the Aileen Andrew Foundation.



Cheryl Ward, a first-year UI graduate student in interior design, employs the new IBM Fast Draft system to work on an interior design problem.

Sherman's current CAD work has a number of campuswide implications. An existing CAD teaching station is presently being used to demonstrate the application and operation of computer-aided design to classes from various academic disciplines. Following the first year of pilot CAD classes, the new facility also will be linked to the campus computer network. With this added capacity, greater emphasis can then be placed on the areas of 3-D design and high-resolution graphics.

"Computer-aid design is truly the cutting edge of computer graphics technology, but it is only now making its debut in the educational environment," Sherman said. "This EXCEL grant will help us maintain the University's position of leadership in this new technology and will give our students a competitive edge when seeking employment."

Pre-proposals are currently being sought for the final year of the Project EXCEL. College faculty members interested in obtaining EXCEL grants to support pilot computer-assisted educational programs must submit a brief project summary and budget statement to the Project EXCEL steering committee. The deadline for submitting EXCEL pre-proposals is November 1, 1985.

UI Turfgrass Research Program Receives \$90,000 Gift

Mr. and Mrs. Ben O. Warren — two pioneers in the turfgrass industry — have recently donated more than \$90,000 to the University of Illinois to support research programs in turfgrass pathology. The generous gift is in addition to more than \$25,000 which the Warrens donated to UI turfgrass research in 1984-85. The program is headquartered in the Department of Plant Pathology.

Warren, who pioneered in the development of bluegrass cultivars and the production and marketing of sod, was the first president of both the Illinois Turfgrass Foundation and the American Sod Producers Association. Mrs. Warren also served as executive secretary of the Illinois Turfgrass Foundation. Until four years ago, Warren was the principal owner of Warren Turf Nursery Corporation, which operates sod nurseries in Illinois and five other states.

Campbell's Comments

by John R. Campbell, Dean



I want to extend a sincere welcome to the College's returning faculty, staff, and students, and to wish everyone personal and professional success in the challenging months ahead. The beginning of a new academic year represents a critical juncture in the institutional life of the College — a time to reflect on our past accomplishments and to explore new opportunities for professional growth and public service.

As a land-grant agricultural institution, we are charged with maximizing the use of our considerable human, physical, and monetary resources and ensuring that the College's organizational structure and programs are "on target" to meet current and emerging societal needs. Ongoing faculty and administrative efforts to obtain new facilities, funding support, and programs are undertaken with these important criteria in mind.

A number of significant changes are underway in both administrative structure and programs as we enter the 1985-86 fall semester. Reorganization efforts described in the summer issue of *AgriView* are moving forward in the Office of Agricultural Communications and Extension Education (OACEE) and in the recently unified Department of Animal Sciences. An *ad hoc* committee also has been established to explore possible means of streamlining the administrative structure within the School of Human Resources and Family Studies, while at the same time maximizing the efficiency, quality, and effectiveness of SHRFS programs.

Refinements in existing programs, as well as the development of new program initiatives, are undertaken to meet demonstrated needs of our resident student body and diverse statewide clientele. Several faculty members, for example, are currently utilizing competitive IBM/EXCEL grants to develop innovative, computer-assisted instructional programs in a broad range of disciplines.

The College also is moving aggressively to deal with the current financial plight of our farmers, a crisis of monumental proportions which clouds the national economic picture — and indeed one that threatens the very survival of our family farms and agribusiness community. Extension's highly successful Rural Route program, which provides personal and financial guidance to farm families throughout Illinois, will be refined and expanded in the months ahead. A "Task-Force on Financial Conditions in Agriculture" has recently been organized in the College to examine agriculture's current economic problems, and to provide insights concerning possible alternative solutions. Additional program thrusts in these and related areas will be forthcoming as we mobilize our educational and research capabilities to meet the pressing needs of those we serve.

Ag Remodeling Projects Enhance College Research Programs

Two familiar College buildings—the Agricultural Engineering Research Laboratory and the Dairy Manufactures Building—are currently taking on a “new look” as they undergo major remodeling and renovation. And the net result will be additional high-quality laboratory space for College research programs in agricultural engineering, wood science and technology, and plant physiology.

Remodeling of the Agricultural Engineering Research Laboratory is now nearing completion, with occupancy likely before the end of the fall semester. The \$404,500 Food for Century III project, funded in FY 1984, features an air-conditioned structural testing floor which will be used primarily by the Department of Agricultural Engineering.

Wood science facilities to be housed in the remodeled building include a new kiln and wood-preservation laboratory, a wood-properties laboratory with walk-in climate chambers and testing equipment, a hot-press laboratory, and a wood-working shop. The remodeled building, which is located adjacent to the new Agricultural Engineering Sciences Building, will provide greatly expanded research and teaching capability with wood products and various other structural materials.

Extensive remodeling also has begun on the second floor of the old Dairy Manufactures Building, utilizing a \$600,000 renovation grant funded under the campus “Remodel for Excellence” Program. When completed, the ambitious remodeling project will provide approximately 4,500 square feet of laboratory space for the research programs of Constantin A. Rebeiz, professor of plant physiology, and 8 to 10 research associates.

New laboratories in the Dairy Manufactures Building will house planned or ongoing research programs in several major areas, including the chemistry and biochemistry of the plant greening process, various applications of photodynamic or “laser” herbicides with greenhouse and field crops, and techniques for inexpensively producing ALA, the primary chemical constituent in photodynamic herbicides.

Rebeiz and his associates also will be conducting research in the development of photodynamic insecticides, plant growth stimulators and retardants, bio-engineering of photosynthetic membranes, and agricultural applications of nuclear magnetic resonance (NMR) techniques.

News items and other articles of interest to the College of Agriculture are solicited on a continuing basis. Submit all materials for possible inclusion in upcoming issues of AgriView to Joanne Courson, Office of the Dean, 101 Mumford Hall. Items may be edited for reasons of space and consistency.

OACEE Formally Established In Early September

September 2, 1985 was the official starting date for a new unit in the College of Agriculture—the Office of Agricultural Communications and Extension Education (OACEE). This unit was organized through consolidation of the Office of Publications, the Office of Agricultural Communications, and part of Vocational Agriculture Service.

Communications Services is the larger of two divisions within the newly formed OACEE. Through four sections—editorial, media, design, and reproduction-distribution—it will provide a full range of communications support for the College. A new position, Assistant Head for Communications Services, is being established to coordinate the management of communications programs and activities.

The other division, Teaching and Research, contains elements of an innovative, multi-disciplinary approach to teaching and research that relates broadly to human processes and knowledge systems in agriculture. This division includes courses and degree programs in agricultural communications and extension education (involving about 15 courses and 115 majors), plus some new staffing for development of research activities. In addition, through joint appointments, several faculty members with related scholarly interests have been designated as affiliated faculty.

“Communications is becoming increasingly important across the entire College of Agriculture as we move rapidly into the Information Age,” explains dean John Campbell. “And we see real potentials for making significant steps forward in the communications services and academic programs of this new unit.”

Undergrad Enrollment Down Slightly; Freshmen Numbers Up

Undergraduate enrollment in the College of Agriculture this fall is 2,220, which is down slightly from the 2,264 reported at the start of the fall, 1984 semester. Included in the total are 760 students in the School of Human Resources and Family Studies. However, the 509 beginning freshmen who enrolled in the College represent an increase from the 482 who began studies one year ago. “This increase in freshmen enrollment is especially gratifying,” noted assistant dean Charles Olson, “because of the increased efforts by College of Agriculture staff persons this past year to provide more frequent and personalized contact with the admitted students.”

A series of mailings throughout the year and a telephone call to the student by a faculty member in the department in which the student was admitted were included in this year's pre-enrollment activity. The resulting yield rate (number of freshmen actually enrolled compared to the number admitted) of 72% was achieved this fall, which is among the highest on the Urbana-Champaign campus.

Plant Sciences Groundbreaking Delayed Until Spring

Plant scientists and departmental administrators hoping for rapid completion of the \$10.116 million Plant Sciences Greenhouses/Headhouse will now have to wait a bit longer than expected for the project to get underway. Contractor bids received for construction of the plant sciences complex have exceeded estimated project costs by about \$2 million, resulting in a temporary delay of the groundbreaking for the new facility.

Several cost-saving modifications have now been made in the design specifications for the complex, including a reduction in the number of air-conditioned greenhouses from nine to three and other changes in the electrical, plumbing, and ventilation systems. According to Douglas Bauling, AES planning engineer, two greenhouse ranges totaling approximately 6,800 square feet also have been eliminated, and a planned headhouse plant conservatory has been redesigned. Campus funds, however, are being requested for construction of the first of two greenhouse ranges deleted from the original design plans, Bauling said.

Under the revised project timetable, contractor bidding will be repeated beginning in late October, with bid opening scheduled for December 5. Groundbreaking for the complex is now expected to take place in the spring of 1986, and the entire project will require approximately two years to complete. The planned construction site is located adjacent to the present Turner Hall greenhouses.

Funding for the major Food for Century III project was appropriated by the Illinois legislature in FY 1984, with groundbreaking originally scheduled to begin in mid-August of this year. When completed, the new facility will house a broad range of plant science research programs in the Departments of Forestry, Horticulture, Plant Biology, and Plant Pathology.

Faculty Research Grants

The following research grants have been awarded to faculty members of the College of Agriculture since July 1, 1985. Parenthesized information indicates the awarding organization or agency, the total dollar amount of the research grant, and its duration.

Constantin A. Rebeiz, Department of Horticulture, "Chlorophyll Biosynthesis: The Reactions Between Coproporphyrinogen and Protochlorophyll(ide)" (*National Science Foundation*, \$215,000, 7/1/85 to 6/30/88).

Hans P. Blaschek, Department of Food Science, "Transformation of *Clostridium Perfringens* Protoplasts" (*National Institute of Health*, \$78,510, 7/1/85 to 6/30/88).

John A. Milner, Department of Food Science, "Selenium Modification of Gene Expression" (*National Institute of Health*, \$152,784, 7/1/85 to 6/30/88).

Donald K. Layman, Department of Foods and Nutrition, "Regulation of Lipid Metabolism by Nutrition and Exercise" (*American Heart Association*, \$13,698, 7/1/85 to 6/30/86).

Stanley E. Curtis, Department of Animal Sciences, "Farrowing Crate Design Past and Future: An Holistic, Multidisciplinary Approach" (*National Pork Producers Association*, \$10,582, 7/1/85 to 6/30/86).

J. Kent Mitchell, John W. Hummel, and Loyd M. Wax, Department of Agricultural Engineering, "Effect of Ridge and Strip Tillage/Weed Control Alternatives on Corn Production" (*U.S. Department of Agriculture*, \$30,500, 7/1/85 to 6/30/86).

David W. Morrison and Gene C. Shove, Department of Agricultural Engineering, "Strategies for Reducing Electrical Consumption" (*Illinois Department of Energy*, \$2,470, 7/15/85 to 8/31/85).

Carl L. Davis, Department of Animal Sciences, "Lactation Performance of Dairy Cows Fed High Amounts of Wet Corn Gluten Feed" (*Illinois Corn Marketing Board*, \$11,000, 8/1/85 to 7/31/86).

Gary E. Pepper, Department of Agronomy, "Soybean Extension Program" (*Illinois Soybean Program Operating Board*, \$46,475, 8/21/85 to 8/20/88).

Leif H. Thompson, Department of Animal Sciences, "Progeny Testing and Fertility Evaluation in Swine" (*Illinois Pork Producers Association*, \$5,000, 9/1/85 to 8/31/86).

Wayne L. Banwart, Department of Agronomy, "Differential Cultivar Response to Acidic Precipitation" (*U.S. Department of Agriculture*, \$118,000, 9/1/85 to 8/31/87).

Janice M. Bahr, Department of Animal Sciences, "Effect of Age on Reproductive Efficiency of the Domestic Hen" (*U.S. Department of Agriculture*, \$175,000, 9/15/85 to 9/30/88).

Cecil D. Nickell, Department of Agronomy, "Soybean Breeding and Genetics" (*Illinois Soybean Program Operating Board*, \$127,133, 10/1/85 to 9/30/88).

Thomas D. Hinesly, Department of Agronomy, "Losses of Heavy Metal to the Atmosphere by Volatilization and Emissions From Soils and Plant Foliage" (*U.S. Environmental Protection Agency*, \$65,916, 10/1/85 to 9/30/86).

Lowell D. Hill, Department of Agricultural Economics, "Evaluation of Alternative Grading Standards for Soybeans" (*American Soybean Association*, \$47,000, 10/1/85 to 12/31/87).

Janice M. Bahr, Department of Animal Sciences, "Avian Pituitary Program: Improvement of Reproductive Efficiency of the Domestic Hen" (*U.S. Department of Agriculture*, \$28,440, 10/1/85 to 9/30/86).

Marcos Kogan, Office of Agricultural Entomology, "Investigation of a Common Mechanism of Soybean Resistance Against Diseases and Insect Pests" (*American Soybean Association*, \$35,536, 10/1/85 to 9/30/87).

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Faculty Awards and Honors

Wayne L. Banwart, professor of soil chemistry, was elected a Fellow of the National Association of College Teachers of Agriculture at the association's recent national convention in Raleigh, North Carolina. In receiving the honor, Banwart was cited for his teaching excellence and contributions to agronomic education.

Janice M. Bahr, professor of animal physiology, has been elected a Fellow of the prestigious American Society for the Advancement of Science. In receiving the honor, Bahr was cited for her "efforts on behalf of the advancement of science or its applications that are scientifically or socially distinguished."

Extension home economics advisers **Cheryl Bielema**, Pike County; **Marilyn Brengle**, Edgar County; and **Cammy Seguin**, Douglas County, were recently honored with the National Association of Extension Home Economists' Distinguished Service Award. The prestigious awards were formally presented at the 1985 NAEHE national meeting, held in San Diego, Cal. in late September. Also recognized at the NAEHE meeting were extension home economists **Kathy Wolters**, Adams County, who received the Florence Hall Award for outstanding and innovative program; and **Donna Mann**, Ogle County, who received the Grace Frysinger Award for outstanding program in the family life area. **Mary Ann Fugate**, Champaign County home economics adviser, was a winner of the 1985 Jessica Nason Annual Session Award for outstanding work in the NAEHE.

Munir Cheryan, professor of food engineering, is a recipient of the 1985 Outstanding Professor Award for excellence in teaching food processing courses. The award was presented by the Association of Food Technologists, whose members are primarily undergraduate students majoring in food science at the U of I.

Gail L. Czarnecki, assistant professor of small animal nutrition; **David H. Baker**, professor of non-ruminant nutrition; and **John E. Garst**, assistant professor of toxicology, have won the 1985 Hoffman-LaRoche Outstanding Research Paper Award for their research study entitled "Arsenic-Sulfur Amino Acid Interaction in the Chick." The award, which recognizes the most outstanding research paper published in the *Journal of Animal Science* during the preceding year, is annually presented by the American Society of Animal Science. The award-winning paper established that the amino acid, cysteine, can increase the toxicity of arsenic compounds in animal feeds.

Richard H. Hageman, emeritus professor of plant physiology, was recently honored with the Dennis Robert Hoagland Award "for distinguished service in the application of plant physiology to agricultural science." The award was presented at the annual

meeting of the American Society of Plant Physiologists, held at Brown University in late June.

Harold G. Halcrow, professor emeritus of agricultural economics, has been elected a Fellow of the American Agricultural Economics Association. He was formally honored at the recent AAEA national convention in Ames, Iowa. Halcrow also was a recipient of the 1985 AAEA Award for Professional Excellence, given for "superior achievement in agricultural economics as exemplified by quality of communication" in his book, *Agricultural Policy Analysis*. He has received the award twice previously.

James E. Harper and **Edward W. Stoller**, professors of plant physiology/USDA, were recently honored with the 1985 Soybean Researchers' Recognition Award, sponsored by the American Soybean Association and ICI Americas, Inc. They joined eight other distinguished U.S. soybean researchers on a ten-day tour of major soybean research facilities in the United States and England. Harper also has been elected as Fellow of the Crop Science Society of America.

William L. Ogren, professor of plant physiology/USDA, is a recipient of the 1985 USDA-ARS Superior Service Award. Ogren was cited for his outstanding research contributions in the areas of photosynthesis and photorespiration. The prestigious USDA award was presented by U.S. Secretary of Agriculture John R. Block at a special ceremony held in Washington, D.C. on June 19.

Constantin A. Rebeiz, professor of plant physiology, has been selected by *Science Digest* as "one of America's outstanding innovators responsible for the 100 most significant technological achievements in 1984-85." Rebeiz was cited for his pioneering work in developing the "laser" or photodynamic herbicide and his major scientific advances in the area of chlorophyll biosynthesis and the plant greening process. He will be featured in a special December, 1985 issue of *Science Digest*, which has a readership of more than 2.5 million. Rebeiz was chosen for the honor by the editors of *Science Digest*, based on a survey of more than 1,200 corporations, universities and colleges, scientific and engineering associations/societies, nonprofit institutions with large R & D programs, and most U.S. government agencies and departments involved in R & D.

John C. Siemens, professor of power and machinery extension, is a co-winner of the 1985 Extension Educational Aids Blue Ribbon Award. The award is annually presented by the American Society of Agricultural Engineers. Siemens collaborated with two Purdue University faculty members, Donald Griffith and Samuel Parsons, to develop and publish a circular entitled *Energy Requirements for Corn Tillage Systems*.

Faculty Activities

A. W. Burger, professor of crop production, has been elected president of the National Association of College Teachers of Agriculture for 1985-86. Burger was named to the top position in NACTA at the association's 31st annual conference, held in Raleigh, North Carolina in June.

David L. Chicoine, associate professor of resource economics and community development, has recently co-authored a book entitled *Governmental Structure and Local Public Finance*. The new study, which was published by Oelgeschlager, Gunn, and Hain, Inc., Boston, Mass., was based on empirical evidence concerning governmental structure and public financing methods in various local Illinois communities. Co-author of the book was Norman Walzer, professor of economics at Western Illinois University.

Duane E. Erickson and **Royce A. Hinton**, professors of farm management extension, have collaborated with Ronald D. Szoke of the UI Computing Services Office to co-author a new book, *Microcomputers on the Farm: Getting Started*. The work, which presents the essentials of acquiring and using a microcomputer in agricultural operations, was published by Iowa State University Press in September.

Jean-Louis Foulley, research scientist at the National Animal Production Research Center, Jouy-en-Josas, France, has been named a George A. Miller Visiting Scholar in the Department of Animal Sciences for the 1985-86 academic year. He will be conducting collaborative research in the area of animal genetics.

Darrel L. Good, associate professor of agricultural marketing and extension agricultural prices/outlook specialist, chaired a USDA panel that recently reviewed current USDA statistical and economic reporting procedures. The panel, which included representatives from universities, agribusiness, commodity groups, and farm organizations, was appointed by U.S. Secretary of Agriculture John R. Block.

Theodore Hymowitz, professor of plant genetics, and **Richard L. Bernard**, professor of plant genetics/USDA, have recently announced the development of three new soybean lines which are free from the Kunitz trypsin inhibitor. The new lines may eventually eliminate an expensive phase of soybean processing for livestock feeds, saving the U.S. soybean industry an estimated \$100 to \$500 million annually. Soybean cultivars currently available cannot be fed raw to poultry and swine because they produce substances that inhibit trypsin, an important digestive enzyme in the pancreas.

The soybean used to develop the new lines was collected in Korea and maintained in the USDA soybean germplasm collection at the U of I.

C. James Kaiser, associate professor of agronomy at the UI Dixon Springs Agricultural Center, has been elected chairperson of Division A-7, the American Society of Agronomy.

Frances M. Magrabi, professor of consumption economics, served as group leader for a six-member team from the Office of Women in International Development which traveled to India during July and August to develop curriculum materials on women in international development. The WID group was awarded a Fulbright-Hays travel grant to support the project.

Donald H. Percival, research professor of wood technology and utilization, Small Homes Council-Building Research Council, has been named to the national board of the Forest Products Research Society. The organization encourages development and application of new technologies in the forest products field and provides linkages for technical interchange between industry and research.

Constantin A. Rebeiz, professor of plant physiology, is one of 15 eminent scientists nationwide selected to make a presentation on the latest advances in science and technology at the 1985 "New Horizons of Science" Briefing, November 3-7, in Baltimore, Maryland. He will be a featured speaker for the meeting of the nation's foremost science writers, which is sponsored by the Council for the Advancement of Science Writing and underwritten by grants from the National Science Foundation and Johns Hopkins University. Rebeiz was invited to speak on recent achievements and breakthroughs in the area of agricultural biotechnology, plant physiology, and the development of man-made photosynthetic membranes.

Vicki R. Schram, assistant professor of consumer economics, has been appointed a member of the *Home Economics Research Journal* Editorial Board for 1985-1987.

Adria R. Sherman, associate professor of nutrition, was an invited speaker at the 13th International Congress of Nutrition, August 18-23, 1985, in Brighton, U.K. She presented a paper and workshop on "Iron and Immune Responses."

Donald R. Smucker, Piatt County Cooperative Extension agriculture adviser, recently completed a two-year international assignment in Belize with the Caribbean Agricultural Extension Project, sponsored by the Midwest Universities Consortium for International Activities (MUCIA). Smucker was cited by MUCIA officials for his outstanding leadership and professionalism in training extension workers and organizing a more efficient extension system in Belize.

Administrative Appointments

Bea Bagby, who previously served as regional director for UI Cooperative Extension Service Region 3, has been named acting assistant director for CES home economics programs, effective August 21, 1985. **Gordon Dowell**, regional director for CES Region 4, will assume the position of acting regional director for CES Region 3 in addition to his present responsibilities.

Bernard M. Heisner, executive secretary/treasurer of the American Guernsey Cattle Club since 1982, has recently been appointed associate director of resource development for the College. He earlier served as director of information for Select Sires and Select Embryos, a national cattle breeding organization, from 1976 to 1981; and was an associate editor for *Hoard's Dairyman* magazine from 1973 to 1975. Heisner is an honors graduate of the UI College of Agriculture, completing his bachelor of science degree in agricultural science in 1971. He served as president of both the UI Dairy Science Club and Illi-Dell cooperative fraternity and was named one of the top five seniors in his graduating class. From 1971 to 1973, Heisner was employed as an extension dairy fieldman in charge of Michigan's state-wide 4-H Dairy Program and did graduate work in dairy farm management at Michigan State University.

Christine A. Lohman, former director of budget and fiscal planning for the Office of Budget Administration and Financial Analysis, University of Southern

California, has assumed the position of director of budget and resource planning for the College, effective September 21, 1985. She succeeds **Robert E. Sullivan**, who retired from the position effective August 31. **Lohman**, who has been employed in budget and fiscal planning at USC since 1979, previously was assistant business manager and admissions office coordinator at Hope College. She is a 1973 graduate of Hope College and completed her master's degree in business administration at Western Michigan University in 1978.

Larry B. O'Reilly, former assistant director of the UI Cooperative Extension Service for home economics programs, left that position on August 21, 1985 to become acting CES personnel officer. He succeeds **Carol Rebbe**, who will retire as personnel officer effective October 31, 1985.

Harvey J. Schweitzer, assistant director of the UI Cooperative Extension Service for community resource development and public policy programs, will retire from that position effective October 31, 1985. He will continue as assistant director of the Agricultural Experiment Station on a half-time basis, working primarily with the AES Farming Systems Project. **Peter D. Bloome**, assistant director for Cooperative Extension agriculture and natural resources programs, will assume program leadership in community resource development and public policy in addition to his current responsibilities.

IlliniNet Offers Software To Staff and Clientele

A microcomputer software catalog listing 18 programs for IBM Personal Computers is currently being distributed by the Illinois Cooperative Extension Service through its Office of Computer Coordination and the IlliNet system.

The current selection of programs has been created by faculty and staff from seven different departments in the College and School. A number of new programs are under development.

For a program to be released through IlliNet, the contents are first reviewed and approved by the faculty within the appropriate department. Each program is also reviewed for technical operations by the IlliNet staff, and a user's guide is prepared and printed to accompany each program. Distribution to campus faculty, county Extension staff, and user-clientele is handled by the Office of Computer Coordination.

Faculty members who want a copy of the new catalog should request one from the IlliNet office in 123 Mumford Hall. A copy of any program can be obtained by supplying a 5.25-inch floppy disk. Those faculty members interested in submitting a program for possible distribution through IlliNet should contact Linda Baskin at 333-9513.

College Awards New Morrison Recognition Scholarship

Pioneer Hi-Bred International, Inc., has recently established a \$50,000 endowment with the University of Illinois Foundation to fund a prestigious new scholarship—the Hugh P. Morrison Recognition Scholarship for outstanding junior and senior students enrolled in the UI College of Agriculture.

The \$3,000 merit scholarship recognizes Morrison's many years of service with the agribusiness firm. He was president of Pioneer Hi-Bred Corn Company of Illinois, now a division of Pioneer Hi-Bred International, Inc., from the time the company was founded in 1937 until his retirement in 1971.

Thomas J. Chamberlain, a senior majoring in agricultural finance, was selected from a field of five finalists in late August to receive the College's first Morrison Recognition Scholarship. The 1985 recipient is the son of Mr. and Mrs. L. Harland Chamberlain of Dixon, Illinois.

Chamberlain is a 1982 Jonathan Baldwin Turner Agricultural Merit Scholar and a member of Nabor House fraternity. In conjunction with his undergraduate studies in the Department of Agricultural Economics, he worked as an intern with the Farm Credit Banks of St. Louis this past summer.

AgriView



College of Agriculture/University of Illinois at Urbana-Champaign

Winter, 1986

Collegewide JBT Programs Foster Academic Excellence

JBT

The College of Agriculture is moving ahead with a multi-faceted effort to recruit academically

talented undergraduate and graduate students in the broad field of agriculture and to strongly support their educational and professional development. This long-term initiative is based on three coordinated programs—all named for Jonathan Baldwin Turner, pioneer Illinois agriculturalist and champion of the land-grant philosophy of higher education during the mid-1800's.

Collegewide programs emphasizing student recruitment and retention, financial support, and professional enhancement include the **Jonathan Baldwin Turner (JBT) Agricultural Merit Scholarship Program**, established in 1979; the **Jonathan Baldwin Turner Undergraduate Research/Scholarship Program**, established in 1982; and the newly developed **Jonathan Baldwin Turner Graduate Fellowship Program**, which will be implemented during the 1985-86 academic year. The ultimate goal of these various programs is to foster academic and professional excellence.

The College's JBT Agricultural Merit Scholarship Program has provided multi-year merit scholarships to talented freshmen enrolling in agriculture and home economics curricula at the U of I for the past seven years. The highly successful program was initiated with two-year, \$1,000 merit awards in 1979, based on the criteria of outstanding academic achievement, demonstrated leadership, and good citizenship.

In 1984, the privately funded scholarships were increased to four-year \$2,500 merit awards, providing added recognition and financial support for top students interested in careers in the agricultural and human sciences. To date, a total of 402 JBT merit scholarships have been awarded to academically talented students from Illinois and elsewhere in the United States, including 67 to 72 during each of the past four years. The College plans to award a similar number for the 1986-87 academic year.

The long-term impact of the JBT Agricultural Merit Scholarship Program is evident in the growing numbers of highly qualified scholarship applicants that have been interviewed for the merit awards. This number has increased from 55 in 1979 to more than 200 in each of the

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UNIVERSITY OF ILLINOIS



Anita Turner Rundquist, great grand-daughter of pioneer Illinois agriculturalist Jonathan Baldwin Turner, is shown congratulating 1985 JBT Agricultural Merit Scholarship recipient Timothy G. Clark at the recent JBT Recognition Banquet. Clark was one of sixty-seven new JBT Scholars honored December 6th in Urbana.

past four years. The College also has been successful in attracting a high percentage of this applicant group, which is reflected in the improved academic caliber of its entering students. There has been a major increase in the number of entering freshmen with a projected grade-point average of 4.0 or above (5.0 = A); and the total percentage of new students having ACT scores of 30 or higher has risen from only 3% in 1979 to 9% at the present time.

Academic enhancement and leadership development are important aspects of the JBT scholarship program. In addition to pursuing a strong program of study, JBT Scholars are encouraged to seek additional means of cultivating their academic and leadership skills. A number of JBT scholarship recipients are active in a recently organized JBT Scholar Club, and many have held prominent roles in other College and campus-wide organizations.

The JBT Undergraduate Research/Scholarship Program was initiated in 1982 to provide a genuine research experience for upper-level undergraduate students enrolled in the College who demonstrate outstanding academic ability and a strong interest in scholarly research. Academically qualified juniors and seniors having a grade-point average of 4.0 or higher are encouraged to apply for competitive research grants (to a maximum of \$1,000) to support an independent research project within their major field of study. The ongoing program provides excellent opportunities for top students to explore new areas of science and technology, meet major intellectual challenges, and contribute to new scientific knowledge by conducting independent research.

Approved research projects are conducted under the close supervision of College faculty members, who provide professional guidance normally afforded graduate students pursuing the Master of Science degree. Student researchers benefit from the close working relationship with their project advisor and research committee and also may receive academic credit for their work.

Program applicants having a grade-point average of 4.5 or above at the time their research proposals are reviewed qualify for supplemental scholarship support in the amount of \$500. Student researchers also may qualify for additional monies to defray publication costs of their findings in scholarly journals and/or to provide travel expenses for presentation of research papers at professional meetings.

Fifty-two undergraduate research proposals have been funded during the past three years, providing nearly \$40,000 in student research support. Twenty-five student researchers also have received supplemental research scholarships totaling \$12,500. The privately funded JBT Undergraduate Research/Scholarship Program has been particularly successful in fostering academic and professional enrichment activities within the College, as well as stimulating increased student interest in scientific research.

A third facet in the College's comprehensive student recruitment and professional development effort is the JBT Graduate Fellowship Program, which the College will initiate during the 1985-86 academic year. Its primary goal will be the recruitment and support of outstanding graduate students interested in pursuing doctoral degree programs in the various agricultural and home economics disciplines.

The newly established fellowships will provide multi-year financial support at highly competitive levels, with the first recipients beginning their graduate degree programs in the fall semester, 1986.

Overall, the three JBT programs provide a comprehensive recruitment, support, and academic enrichment framework which can underpin the student's educational and professional development from the freshman through the doctoral level. According to associate dean **William L. George**, "The JBT programs represent an integral part of the College's long-range plans to promote academic excellence and human capital enhancement in the agricultural, food, and human sciences."

Wharton To Keynote March 13 College Awards Banquet

Clifton R. Wharton, Jr., chancellor of the State University of New York system and chairman of the board for the Rockefeller Foundation, will be the keynote speaker for the 1986 College of Agriculture-Paul A. Funk Recognition Awards Banquet. The evening banquet and awards program is scheduled for Thursday, March 13, at 6:30 p.m. in the University's Illini Union Ballroom.

Wharton is an internationally recognized authority in the areas of economic development, U.S. foreign policy, and higher education. He served as president of Michigan State University from 1970 to 1978 and is a past chairman of the National Association of State Universities and Land-Grant Colleges.

Wharton earlier was a senior foundation official with both the Agricultural Development Council, Inc. and the American International Association for Economic and Social Development, specializing in the economic development of Asian and Latin American countries. He is a member of the Council on Foreign Relations and chaired the influential Board for International Food and Agricultural Development, U.S. Department of State, from 1976 to 1983.

A highlight of the March 13 awards banquet will be the presentation of the 1986 Paul A. Funk Award to three distinguished faculty members from the College. The prestigious award, recognizing outstanding contributions to the betterment of agriculture, is jointly sponsored by the College and the Paul A. Funk Foundation, Bloomington, Illinois.

Six College faculty members also will be recognized with the newly established Faculty Award for Excellence. A Young Faculty Award and a Senior Faculty Award will be given "for outstanding professional achievement and demonstrated excellence" in each of the three categories of teaching, extension, and research. Winners of the new Faculty Award for Excellence will receive a certificate of recognition, as well as a \$500 recurring annual salary increment effective August 21, 1986.

Tickets for this premier event of the academic year will be available from the various departments and other administrative units in the College, as well as from the Office of the Dean, 101 Mumford Hall. The banquet ticket price for University faculty, staff, alumni, and the general public will be \$10.00 per person. A special half-price ticket for both undergraduate and graduate students will be available at a cost of \$5.00 per person.

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Plant Sciences Construction Receives Go-Ahead

Preliminary land-clearing is scheduled to begin soon for the new \$10.12 million Plant Sciences Greenhouses/Headhouse complex on the central agriculture campus. Construction contracts have now been approved by the state Capital Development Board following the successful December 5 bid opening. Weather permitting, ground-breaking for the major Food for Century III project is expected to commence on or before March 1.

The spacious new facility, comprising about 95,000 total square feet, will be located directly east of the existing Turner Hall greenhouses. The long-sought plant sciences complex experienced a brief construction delay this past fall when contractor bids on the original design specifications exceeded project cost estimates. Following redesign of the state-funded FFC III project, a second bid period was initiated in late October.

Favorable contractor bids received for the redesigned complex will permit construction of a multi-use headhouse containing approximately 22,000 net assignable square feet (NASF) of space. The adjacent greenhouse complex will include a total of eleven environmentally-controlled ranges, containing about 39,000 NASF.

Alternate features now restored to the project include one finished greenhouse range, one shell greenhouse range, laboratory casework, four coldrooms, and a connecting tunnel to the nearby Turner Hall greenhouses. Campus funds also have been requested to complete one of the eleven greenhouse ranges originally planned for the complex.

According to **Douglas Bauling**, AES planning engineer, any contingency funds that become available as the project progresses will likely be used to procure soil-handling equipment and additional lighting fixtures and benches for the facility. An additional \$450,000 for movable equipment has already received legislative approval in Springfield but has not yet been released.

When completed in 1988, the new plant sciences complex will house a broad spectrum of basic and applied research conducted by four departments—Horticulture, Plant Pathology, Forestry, and Plant Biology. Nearly half (42%) of the net assignable greenhouse space and three-fourths of the headhouse space will be allocated to the Department of Horticulture, replacing crowded, deteriorating facilities currently occupied by the horticulture faculty. An additional 30% of the available greenhouse space will be utilized by the Department of Plant Biology, with the remainder to be occupied by Forestry and Plant Pathology. A modern plant conservatory also will be located adjacent to the headhouse.

"This state-of-the-art facility will enable scientists representing several disciplines to conduct basic research at the molecular level in computer-controlled growth chambers and, concurrently in the same building complex, to study the whole plant under more conventional greenhouse conditions," says College dean **John R. Campbell**. "It will be a tremendous asset to numerous research programs of economic and social significance to the people of Illinois."

Campbell's Comments

by John R. Campbell, Dean



My very best wishes for a happy, healthy, and productive New Year to the readership of *AgriView*! Although crystal-ball gazing is at best an imperfect art, I am nevertheless optimistic that 1986 will be a banner year in our ongoing efforts to implement effective new programs and obtain state-of-the-art facilities for the College—and, I might add, in enhancing our institutional capability to serve our nation's agricultural and food sector.

As noted elsewhere in this issue of *AgriView*, significant progress is already apparent in the College's long-range capital improvement program. The \$10.12 million Plant Sciences Greenhouses/Headhouse complex will move into its construction phase in early spring, with ground-breaking tentatively slated for March 1 or sooner. Favorable contractor bids will permit us to complete all of the basic project components and alternates, including a modern headhouse and eleven greenhouse ranges totaling nearly 100,000 square feet of space. Completion of this much-needed plant sciences complex will assure modern facilities for our researchers in horticulture, forestry, and plant pathology, while also paving the way for sophisticated new work in many interdisciplinary and multidisciplinary areas.

Thanks to the dedicated efforts of our Illinois Congressional delegation, recent news from Washington was also extremely good! Congress has approved the \$3 million planning appropriation for a federally-funded biotechnology center on campus; and President Reagan subsequently has signed the enacting legislation on December 20 as part of an omnibus federal spending bill.

We anticipate working closely with USDA officials to ensure maximum College input and involvement with this approximately 150,000-square-foot Plant and Animal Sciences Research Center, which will house both College and USDA agricultural scientists working at the cutting edge of biotechnology research. We also view this planned federal research facility as an extremely valuable complement to other existing or planned College laboratories, affording excellent opportunities for faculty research interaction in both basic and applied fields.

I am especially pleased to report that the College will launch its new Jonathan Baldwin Turner Graduate Fellowship Program in 1986, with the first JBT Fellows beginning their studies in the fall, 1986 semester. This ambitious program will undoubtedly help attract some of our nation's finest scientific talent to the agricultural and home economics disciplines. Equally important, it will help ensure the vitality and growth of our nation's agricultural enterprise in the challenging decades ahead.

College Launches JBT Graduate Fellowship Program



With strong faculty endorsement, the College's new Jonathan Baldwin Turner (JBT) Graduate Fel-

lowship Program will soon be moving ahead from the planning stage to assume a key role in the collegewide student recruitment and professional enhancement effort. Guidelines for the fellowship program were formally approved at a College faculty meeting in November, 1985.

The newly established fellowships will be offered, on a competitive basis, to highly qualified graduate students interested in pursuing doctoral degree programs in the various agricultural and home economics disciplines. According to associate dean **William L. George**, applicant screening and selection procedures are now being implemented so that the first JBT Graduate Fellows may begin their doctoral degree programs in the fall, 1986 semester.

The new fellowship program is expected to attract a highly select group of doctoral candidates—academically talented, highly motivated individuals who are very likely to make significant professional contributions in their chosen field of scientific endeavor. "Implementation of this new program is especially timely," George stresses, "owing to the growing need for trained researchers and educators in today's increasingly sophisticated agricultural science fields."

The basic JBT Graduate Fellowship stipend will be \$10,000 per academic year, with an opportunity to renew the fellowship for up to two additional years. Criteria for retention include outstanding progress and appropriate academic rigor in the fellow's program of study. At their discretion, individual College departments may supplement the \$10,000 annual stipend with additional internal funds. Fellowship recipients will be formally designated JBT Graduate Fellows upon entering the program and will receive additional honors and recognition from the College.

During the first year of the program, one or more JBT Graduate Fellowships will be awarded in each academic department of the College having an approved doctoral degree program and submitting credentials of qualified fellowship applicants to the College's Director of Resident Instruction on or before **April 1, 1986**. Prospective applicants planning to enroll in an approved interdisciplinary doctoral program are eligible to compete for these fellowships through the College's academic department of their major professor.

Individual College departments will be responsible for identifying and screening prospective fellowship applicants, with final selection of new JBT Graduate Fellows to be made by an *ad hoc* collegewide JBT fellowship review committee.

Eligibility requirements for the JBT fellowship awards are rigorous, reflecting the extremely high caliber of graduate student being sought. JBT Graduate Fellows must have completed a master's degree or equivalent graduate course work in an appropriate discipline at the time of entry. All fellowship applicants

must have maintained an overall grade-point average of 4.75 or higher (5.00 = A) for their final 60 semester credit hours of undergraduate study and for all graduate courses taken. Additionally, applicants must attain a minimum score of 1,100 on the Graduate Record Examination, submit a comprehensive statement of research interests and professional goals, and be a U.S. citizen.

To retain the JBT Graduate Fellowship for a second or third year, recipients must maintain a minimum University grade-point average of 4.50 and show evidence of outstanding research progress and/or potential. JBT Graduate Fellows will be evaluated annually by their major professor and graduate department chairperson.

Overall guidelines for the JBT Graduate Fellowship Program were formulated by an *ad hoc* fellowship program development committee, chaired by Department of Animal Sciences head, **W. Reginald Gomes**. Other committee members included professors **Janice M. Bahr**, **Cleora J. D'Arcy**, **John W. Erdman**, **Adria R. Sherman**, **Gene C. Shove**, and **Walter E. Splittstoesser**. The committee will also be responsible for selecting the 1986 JBT fellowship recipients and recommending any needed revisions in the program.

The new program will be modeled after the highly successful undergraduate JBT Agricultural Merit Scholarship Program, with funding support derived from endowment sources and gifts from business, industry, commodity and professional organizations, private individuals, alumni, and other College support groups.

Applicants for the new JBT Graduate Fellowships are currently being sought for the 1986-87 academic year. Prospective fellowship applicants should follow normal Graduate College admissions procedures via specific graduate departments in the College of Agriculture. Contact William L. George, Associate Dean and Director of Resident Instruction, 104 Mumford Hall (phone 217/333-3380) for further information about these awards.

\$25,000 Frerichs' Gift Benefits UI Corn & Soybean Research

A recent gift of \$25,000 from **Bernice Frerichs**, Evanston, will support future corn and soybean research in the College of Agriculture. The Kraft/Frerichs Agricultural Research Fund was established with the UI Foundation in October, 1985 as a memorial to the donor's parents, **Mr. and Mrs. Menno Frerichs**; her sister, **Verna Marberry**; and her grandfather, **Louis G. Kraft**. All had their roots in the family's grain farm near Gilman, Illinois—productive farmland that had been in the family for 80 years until sold in early 1985.

In providing the generous gift, Miss Frerichs indicated her desire to have a portion of the farm proceeds go to benefit future generations engaged in corn and soybean production. Agricultural research, she believes, permits farmers to compete on a more independent basis and thus represents a fitting legacy to the future.

Faculty Research Grants

The following research grants have been awarded to faculty members of the College of Agriculture for start-up dates from July 1, 1985 through December 1, 1985. Parenthesized information indicates the awarding organization or agency, the total dollar amount of the research grant, and its duration.

Janice M. Bahr, Department of Animal Sciences, "Regulation of Follicular Maturation in the Domestic Hen" (*National Science Foundation*, \$178,000, 7/1/85 to 6/30/88).

Leann L. Birch, Department of Human Development and Family Ecology, "Associative Conditioning of Children's Food Preferences" (*National Institute of Health*, \$64,214, 7/1/85 to 6/30/86).

Joseph W. Stucki, Department of Agronomy, "Mossbauer Spectrometer Accessories to Study the Magnetic Ordering Properties and Coordination Environment of Fe in Oxides and Phyllosilicate Minerals" (*National Science Foundation*, \$29,900, 9/1/85 to 2/28/87).

David L. Thomas et al, Department of Animal Sciences, "Cause of the Spider Syndrome in Suffolk Sheep" (*Illinois Department of Agriculture*, \$40,000, 7/1/85 to 6/30/86).

Theodore Hymowitz, Department of Agronomy, "The Genus *Glycine* Subgenus *Glycine*: Broadening the Genetic Base of Soybeans" (*U.S. Department of Agriculture*, \$140,000, 8/21/85 to 8/20/88).

Glenn A. Raines, Department of Agronomy, "Manure Rate Study" (*Illinois Pork Producers Association*, \$7,000, 9/1/85 to 8/31/86).

Peter J. Bechtel and Floyd K. McKeith, Department of Animal Sciences, "Palatability Characteristics of Midwest Pork" (*Illinois Pork Producers Association*, \$5,000, 9/1/85 to 8/31/86).

Ross P. Holmes, Department of Food Science, "26-Hydroxycholesterol: Its Relationship to Serum Cholesterol Levels and Its Effect on Cellular Properties" (*National Livestock and Meat Board*, \$16,600, 9/1/85 to 8/31/86).

Stanley E. Curtis, Department of Animal Sciences, "Pork Quality: Effects of the Hog's Rearing Environment" (*Illinois Pork Producers Association*, \$8,500, 9/1/85 to 8/31/86).

Wayne L. Banwart, Department of Agronomy, "Differential Cultivar Response to Acidic Precipitation" (*U.S. Department of Agriculture*, \$118,000, 9/1/85 to 8/31/87).

Lawrence E. Schrader, Department of Agronomy, "Biochemical and Molecular Analysis of Ribulosebisphosphate Carboxylase/Oxygenase Activation" (*U.S. Department of Agriculture*, \$120,000, 9/30/85 to 9/30/89).

Gilbert B. Fletcher, Department of Agronomy, "Maintenance of Genetic Stock Center" (*U.S. Department of Agriculture*, \$60,984, 10/1/85 to 9/30/86).

Robert W. Rinne, Department of Agronomy, "Identification of Biochemical Mechanisms Controlling Protein and Oil Content in Soybean Seeds" (*American Soybean Association*, \$36,362, 10/1/85 to 9/30/87).

Fred A. Kummerow, Department of Food Science, "Nutrients Supplied Through Corn That Alleviate Therosclerosis" (*Illinois Corn Marketing Board*, \$52,000, 10/1/85 to 9/30/86).

C. Robert Taylor, Department of Agricultural Economics, "Economic Analysis of Aggregate Impacts of Technological Change and Pollution Abatement" (*U.S. Department of Agriculture*, \$40,000, 10/1/85 to 9/30/87).

Jimmy H. Clark, Department of Animal Sciences, "Response of Dairy Cattle to Various Combinations of Rumen-Protected Methionine and Rumen-Protected Lysine" (*Tennessee Eastman Co.*, \$92,812, 10/1/85 to 1/1/88).

Michael Grossman, Department of Animal Sciences, "Support for Gordon Conference on Quantitative Genetics and Biotechnology" (*U.S. Department of Agriculture*, \$3,000; and *National Science Foundation*, \$3,000, 10/1/85 to 3/31/86).

John A. Milner, Division of Nutritional Sciences, "The Role of Nutrition in Health Maintenance Workshop" (*University of Delaware and Cooperative State Research Service*, \$38,000, 10/6/85 to 10/8/86).

Richard L. Mulvaney, Department of Agronomy, "Biological N₂ Fixation: Fate and Availability of Fixed N in Pakistani and U. S. Soils" (*National Science Foundation*, \$19,850, 11/15/85 to 4/30/87).

John W. Dudley, Department of Agronomy, "Research Program on Autetraploid Corn" (*Standard Oil of Ohio*, \$29,356, 12/1/85 to 12/1/86).

Improving Your Teaching Satisfaction

Are you getting solid enjoyment from your teaching? Would you like help in improving your lesson plans or your ability to spark lively classroom discussions?

Priscilla Visek, from the campus Division of Instructional Development, works with faculty and teaching assistants in the College of Agriculture to sharpen teaching skills and classroom strategies. Her office is dedicated to making teaching more effective and more enjoyable to both teachers and students.

Mrs. Visek conducts workshops to introduce teaching assistants to such important elements of college instruction as lecture skills, lesson planning, test construction, and questioning techniques. She also helps individual faculty members with their instructional concerns. Faculty can participate in small groups or request individual consultation. Workshops can be tailored to the special needs of specific departments or groups of faculty. Confidential videotaping is available to help instructors evaluate their own classroom performance.

If you would like to expand your repertoire of instructional strategies, discuss problems arising from your lab sections, or talk about ways to deal with unique classroom situations, Mrs. Visek is ready to assist you. Phone her at 333-3370 and discover ways to gain greater satisfaction from your classroom responsibilities.

Faculty Awards and Honors

John B. Claar, former director of the UI Cooperative Extension Service and INTERPAKS (International Program for Agricultural Knowledge Systems), was honored in October with the "Cooperative Friend" Award for his long-term support and dedicated service to agricultural cooperatives. The recognition award was presented by Governor James Thompson on behalf of the Illinois Cooperative Coordinating Committee, which represents the state's agricultural cooperatives and 80,000 cooperative members. Claar also served as UI associate vice-president for public service and is currently a senior project adviser with INTERPAKS, working in the areas of international agricultural development, management, and extension policy.

Extension agriculture advisers **Ronald Cornwell**, Madison County; **James Daugherty**, Peoria County; and **C. Richard Swope**, Franklin County, were honored in October with the National Association of County Agricultural Agents 1985 Distinguished Service Award. The award, which is the national advisers association's highest honor, was presented at the NACAA annual meeting in Hershey, Pennsylvania.

Other Illinois agriculture advisers winning 1985 NACAA awards included **John Pero**, Jersey County, recipient of the Conservation Education Award; and **John Church**, Kendall County, recipient of the Achievement Award. NACAA Action Award winners for 1985 included **Don Bergfield**, Edgar County; **Ned Birkey**, Vermilion County; **Dennis Bowman**, DeWitt County; **Duane Frederking**, Madison County; and **Gary Varner**, Champaign County.

Robert D. Espeseth, Extension outdoor recreation specialist and associate professor of recreation and park resources, was honored by the National Association for Park Resources at its 1985 Annual Congress in October. Espeseth was cited for his meritorious service and outstanding contributions to the parks and recreation profession, as well as his leadership in the Society. He currently is co-coordinator of the Illinois-Indiana Sea Grant Program.

James E. Harper, professor of plant physiology/USDA, has been elected a Fellow of the Crop Science Society of America. He was formally honored at a CSSA luncheon held December 3 in Chicago.

Under a policy recently adopted by the CSSA board of directors, twenty-one other current or emeritus faculty members of the UI Department of Agronomy who had previously been elected Fellows of the American Society of Agronomy also were named CSSA Fellows in 1985. These include **D. E. Alexander**, **R. L. Bernard**, **C. M. Brown**, **A. W. Burger**, **J. W. Dudley**, **D. W. Graffis**, **R. H. Hageman**, **J. B. Hanson**, **J. R. Harlan**, **D. A. Holt**, **R. W. Howell**, **T. Hymowitz**, **J. A. Jackobs**, **A. L. Lang**, **D. A. Miller**, **W. L. Ogren**, **L. E. Schrader**, **W. O. Scott**, **F. W. Slife**, **G. F. Sprague**, and **E. H. Tyner**.

Robert G. Hoeft, professor of soil fertility extension, has been elected a Fellow of the Soil Science Society of America and the American Society of Agronomy. He received the dual recognition at the 1985 annual meeting of the two professional societies, held in Chicago during early December.

Recipients of 1985 UI Cooperative Extension Service Outstanding Staff Member Awards for "sustained excellence in programs and service" included **Richard P. Kesler**, professor of farm management extension; **Lois T. Mitchell**, Rock Island County senior extension adviser in home economics/EFNEP; **Gary W. Harpestad**, associate professor of dairy extension; and **Arthur J. Muehling**, professor of farm structures extension.

Extension faculty receiving 1985 Outstanding Staff Member Awards for "outstanding or innovative program" were **Mary A. Keith**, assistant professor of foods and nutrition extension; **James E. Schuster**, DuPage County senior extension adviser in horticulture; and **Karen S. Wignall**, Stephenson County associate extension adviser in 4-H/Youth.

The seven state award winners, who were selected through a peer nomination and review process, were formally honored in Urbana on October 28. Each received a plaque at the awards ceremony.

William R. Oschwald, director of the UI Cooperative Extension Service and professor of agronomy, is a 1985 recipient of the North Central Region Distinguished Service Award of Epsilon Sigma Phi, the national Extension honorary. Oschwald, who is also associate dean of the College, received the award at a November ceremony in Washington, D.C. The prestigious award is annually presented to one Epsilon Sigma Phi member from each of four multi-state regions who has made outstanding contributions to Extension programs and activities.

Donald G. Smith, professor of farm management, is a 1985 recipient of the prestigious D. Howard Doane Award, given by the American Society of Farm Managers and Rural Appraisers at their annual convention in Kansas City, Missouri during mid-November. The Doane Award recognizes individuals who have made outstanding professional contributions to agriculture, with emphasis on achievements in farm management or rural appraisal.

Extension youth advisers **Linda Smith**, Christian County; and **Donna Asbury**, Cook County Area III, have been honored with the 1985 Distinguished Service Award of the Illinois Association of Extension Advisers-Youth (IAEA-Y).

Trish Merna and **Jananne Finck**, Knox County, also received the IAEA-Y "Outstanding Program" Award for their county program, "From Farm to Table." Both were recognized at the IAEA-Y annual meeting in late October.

Faculty Activities

Janice M. Bahr, professor of reproductive physiology, has been invited by the National Science Foundation to serve as a panel member to review the Presidential Young Investigator Awards.

Peter J. Barry, professor of agricultural finance, was recently selected to serve as editor of the *American Journal of Agricultural Economics* from 1986 through 1989. The journal is published by the American Agricultural Economics Association.

John B. Claar, senior adviser for INTERPAKS (International Program for Agricultural Knowledge Systems), served as a consultant in Cameroon during December and also participated in the FAO-USAID-World Bank workshop held in Yaounde, Cameroon to further the linkages between agricultural extension and research. He will travel to Caracas, Venezuela in late February on a follow-up to a U.S. Presidential Mission on agricultural development.

Sara U. Douglas, assistant professor of textiles and apparel, has received a William and Flora Hewlett International Research Grant for 1986. She will travel to Singapore this coming summer to study the impact of U.S. trade policy on the textiles and apparel industries in Malaysia and Singapore.

Frederick C. Fliegel, professor of rural sociology and an INTERPAKS associate, visited Pakistan in November to further the University's work in integrating agricultural research and extension programs of that country's Northwest Frontier Province. The multi-year, USAID-funded project, "Transformation and Integration of the Provincial Agricultural Network," is headquartered at the provincial agricultural university in Peshawar.

Daniel Gianola, associate professor of animal breeding and systems analysis, has received a \$200,000 research grant from the Bi-National Agricultural Research and Development Fund (BARD). He will be conducting a three-year research project to develop methods for genetic analysis of discrete traits of economic importance to U.S. and Israeli dairy cattle populations. Project co-investigators for the international project include **Rohan L. Fernando** and **Charles R. Henderson**, both faculty members of the UI Department of Animal Sciences; and **J. Weller** and **R. Bar-Anan**, Volcani Institute, Bet-Dagan, Israel.

Margaret R. Grossman, associate professor of agricultural law, has been elected to a three-year term (1985-88) on the board of directors of the American Agricultural Law Association. She served as secretary-treasurer of the 500-member national organization from 1983 to 1985.

Stuart Hawbaker, Macon County Extension agriculture adviser, was recently elected president of the Illinois Extension Advisers Association. He will represent the statewide professional organization in numerous official capacities, including serving as an *ex officio* member of the Illinois Farm Bureau board of directors.

Carrollyn L. Hunt, Marshall-Putnam County Extension home economics adviser, has been named president-elect of the National Association of Extension Home Economists. She will chair the program committee for the 1986 NAEHE annual meeting and assume the office of NAEHE president in 1987.

Sam H. Johnson III, associate professor of economic development, has been named treasurer of the International Water Resources Association. He also is spending calendar year, 1986 in Jakarta, Indonesia with the International Irrigation Management Institute.

Violet M. Malone, professor and state leader of Extension education, and **Raymond A. Woodis**, Extension communications specialist, have been invited by Jordan's Ministry of Agriculture to conduct a training workshop in that Middle East nation during April. The planned workshop will focus on extension education and agricultural communications methods.

Marvin P. Steinberg, professor of processing and food engineering, visited Taiwan in late October and early November to develop cooperative research on feed and fuel derived from feedlot biomass. The trip was sponsored by the National Science Foundation in conjunction with the American Institute in Taiwan and the Taiwan National Science Council.

Edwin W. Vernon, head of the design section in the Office of Agricultural Communications and Extension Education, has been elected chairperson of the North Central Region mass communications research committee (NCR-90) for 1985-87. The committee is composed of agricultural communications researchers from the 12-state North Central Region, plus Pennsylvania and New York. Its purpose is to identify agricultural communications research being conducted, primarily in the North Central Region, and to report that research back to agricultural communicators at the member land-grant institutions. The University of Illinois will host the committee's annual meeting in 1986.

Loyd M. Wax, professor of plant physiology/USDA, is the newly installed president of the North Central Weed Control Conference (NCWCC). **Edward W. Stoller**, professor of plant physiology/USDA, will continue in his role as editor of the NCWCC proceedings; and **Ellery L. Knake**, professor of weed science extension, will serve as NCWCC liaison representative to the Weed Science Society of America.

Administrative Appointments

Robert J. Bonnell, former vice-president of public affairs for the Florida Phosphate Council, has been appointed assistant head for communications services in the recently organized Office of Agricultural Communications and Extension Education. In his new role, Bonnell will manage and coordinate a broad range of communications programs and activities within the OACEE Communications Services Division. The new division includes editorial, media, design, and reproduction-distribution sections.

A 1965 graduate of Providence (R. I.) College, Bonnell has had extensive experience in the print media field. He began his newspaper career with the *Morristown, N. J. Daily Record* in 1968, working in various positions from reporter to managing editor before joining Sentinel Communications Co. in 1974. Bonnell served as assistant managing editor and managing editor of the *Orlando Sentinel* from 1974 to 1978, with responsibility for the newspaper's news-gathering, editing, and administrative areas. He became editorial director for Suncoast Publications, a group of 14 non-daily Florida newspapers, in 1978 and subsequently joined the Florida Phosphate Council as a public relations manager in 1980. He has been responsible for the trade association's extensive public relations and community affairs programs since that time.

Bonnell has been active in several professional organizations in the communications field, including the Society of Professional Journalists (Sigma Delta Chi),

the International Association of Business Communicators, the Florida Press Association, and the Florida Public Relations Association. He was honored with the Florida Public Relations Association's prestigious Golden Image Award in 1984.

Dale H. Lattz, former fieldman for the East Central Illinois Farm Business Farm Management (FBFM) Association, has been named Extension state leader for the Illinois FBFM field staff. He replaces Extension farm management specialist **Delmar Wilken**, who recently retired after 35 years of service with the nationally recognized FBFM program. In his new role, Lattz will work closely with FBFM state coordinator Charles Cagley and other faculty members in the UI Department of Agricultural Economics, providing educational leadership, training, and program support for FBFM field staff serving 7,800 farmer-cooperators statewide. The Illinois FBFM Association includes 10 local or regional FBFM associations.

A native of the Peotone area, Lattz was a 1972 graduate of Peotone High School and received the FFA State Farmer degree. He earned a bachelor's degree in agricultural economics at Southern Illinois University-Carbondale in 1976 and a master's degree in production economics at the University of Nebraska in 1978. Since that time, he has served as an FBFM fieldman for approximately 130 FBFM farmer-cooperators in Piatt and DeWitt Counties.

Hieronymus Fellowship Established

A \$136,000 fellowship endowment recently established by College alumnus **Gary K. Bielfeldt**, Peoria, will be used to fund the **Thomas A. Hieronymus Fellowship** for the study of speculative markets. Bielfeldt, who completed his bachelor's degree in agriculture in 1958 and master's degree in agricultural economics in 1959, is a former student of Hieronymus.

Now a professor emeritus in the UI Department of Agricultural Economics, Hieronymus is widely known for his work in agricultural marketing and speculative commodities. He was a faculty member in the department from September, 1949 to February, 1981.

According to **Lynette Fournes**, College director of resource development, the large targeted gift will provide annual fellowships for top graduate students enrolled in the UI Department of Agricultural Economics "who are studying or performing research in the subject-matter area of speculative markets."

The first \$12,500 Hieronymus Fellowship has been awarded to **David Neff**, a native of Goshen, Indiana. Neff is currently completing his master's degree in agricultural marketing at the U of I, with emphasis on commodity options. He will be beginning his doctoral studies here in January.

\$30,000 Coolidge Endowment To Fund Extension Scholarships

William F. and Isabel Coolidge of Pasadena, California have recently established a \$30,000 endowment with the UI Foundation to fund scholarship awards for undergraduate students in the College of Agriculture who demonstrate a sincere interest in employment with the Cooperative Extension Service.

Coolidge, who is now 92 years old, was a 1918 graduate of the College and a longtime employee of the UI Cooperative Extension Service. He served as Extension farm adviser in Macoupin, Morgan, and Livingston Counties from 1928 to 1950 and subsequently was assistant state leader of farm advisers from 1950 to 1962. At the time of his retirement in 1962, Coolidge held the rank of associate professor of agricultural extension.

The dean of the College of Agriculture will select recipients of the newly established scholarships with the advice and recommendations of the awards committee of Alpha Nu chapter of Epsilon Sigma Phi, the state leader of extension education, and the director of the UI Cooperative Extension Service.

News items and other articles of interest to the College of Agriculture are solicited on a continuing basis. Submit all materials for possible inclusion in upcoming issues of AgriView to Joanne Courson, Office of the Dean, 101 Mumford Hall.

AgriView



College of Agriculture/University of Illinois at Urbana-Champaign

Spring, 1986

Plant Sciences Construction Underway; Ground-Breaking Ceremony Held

This year's unusually mild winter and dry spring have provided excellent conditions for contractors constructing the new \$10.12 million Plant Sciences Greenhouses and Headhouse complex on the central agriculture campus. As of May 15, much of the excavating and earth-moving work for the extensive project was already completed, underground utilities were in place, and concrete footings for the headhouse and eleven greenhouse ranges were being laid.

According to **Douglas B. Bauling**, UI Agricultural Experiment Station planning engineer, construction of the new facility is moving ahead on schedule and eight percent of the total project has now been completed. The official target date for finishing the complex has been set for December, 1987.

A formal ground-breaking ceremony was held at the busy construction site east of Turner Hall on April 28. Participants in the event included Governor **James R. Thompson**, UI president **Stanley O. Ikenberry**, UIUC chancellor **Thomas E. Everhart**, College dean **John R. Campbell**, and representatives of The UI Board of Trustees and the State Capital Development Board.

In his keynote remarks at the ceremony, Governor Thompson cited the critical importance of the ten-year-old Food for Century III capital program for food-production research as Illinois agriculture strives to maintain a competitive position in the world marketplace.

"For too long, we have believed that we are better than anybody else in terms of agricultural technology. Today, we have come to realize that foreign agriculture is almost as good as ours."

Agricultural research has a key role in developing new crops and value-added products which can benefit the entire Illinois economy, Thompson said. "We must find new crops and new uses for our traditional crops. We must add the value from the Illinois worker to the value from the Illinois farmer."

Completion of the sophisticated new plant sciences complex, Thompson emphasized, will help "set the stage for the day when Illinois can lead the revolution in agriculture in the United States and the world."

In his remarks, UI president **Stanley O. Ikenberry** also stressed the great potential of the new research complex for the state's agricultural enterprise, noting that "agriculture and hi-tech are synonymous."



UI President Stanley O. Ikenberry and Illinois Governor James Thompson are shown at the April 28 ground-breaking ceremony for the new \$10.12 million plant sciences complex on the Urbana-Champaign campus.

UIUC Opens "Gateway" to Africa With Institutional Collaboration Project In Kenya

A "gateway" for long-term institutional collaboration has been established between the University of Illinois at Urbana-Champaign and Egerton College in Kenya under a contract signed in Washington, D.C. on April 23, 1986.

Under the recent formal agreement, the UIUC Office of International Agriculture sent a project team to Kenya on May 8 to design the collaborative program. This preliminary work is expected to result in a five-year, \$5 million institutional development contract for the UIUC, funded by the U.S. Agency for International Development (USAID).

"Institutional Development for Agricultural Training," or IDAT, is a comprehensive USAID-financed project designed to strengthen and expand the institutional capability of Egerton College as a major regional center for agricultural training, adaptive research and

educational outreach. The Kenyan college will adapt the broad philosophy and organizational patterns of U.S. land-grant institutions, with the UIUC serving as its major educational resource and institutional model.

According to **John R. Campbell**, dean of the UIUC College of Agriculture, the IDAT project also will have the long-term goal of fostering a "permanent, ongoing institutional relationship" between the UIUC and Egerton College, based on the "gateway concept." The formal mechanism of IDAT will provide a "gateway" for each partner to access the resources, faculty and programs of the sister institution, as well as other universities and private or governmental organizations in the U.S. and Kenya.

"In addition to its major institution-building aspects, we see the IDAT project as a challenging opportunity for Illinois faculty, students, and other agriculturalists to access the many educational situations in Kenya and the African continent," Campbell said.

Established in 1939, Egerton College is located about 100 miles from the Kenyan capital of Nairobi and is considered one of the major agricultural institutions in East Africa. It currently has 134 faculty members and a student enrollment of more than 1,600. About 10 percent of its student body comes from various other African nations, with the remainder from all geographic regions of Kenya.

The college offers three-year diploma programs in 16 agricultural and home economics disciplines, as well as community-oriented programs and courses for other training institutions. Its graduates form the core of the technical support staff at all of Kenya's major research stations and make up the majority of the nation's extension service.

During the initial phase of the multi-year project, an IDAT design team will be working in close collaboration with Egerton College faculty and staff to develop institution-building strategies in six primary areas: **institutional development, education and training, institutional administration, curriculum development, instructional materials production and financial analysis.**

Continuing education programs, adaptive research and related outreach activities also will be planned for a new agricultural resources center at Egerton College.

"The institutional development phase of the IDAT project will be begun during 1986 and largely completed within a three-year period," said **John J. Nicholaides**, associate dean of the UIUC College of Agriculture and director of its Office of International Agriculture.

Later phases of the project will place increased emphasis on mutual interests and cooperation of the two institutions, including greater interchange of agricultural faculty, students, scientific information and other educational resources.

"We anticipate that special study programs will be arranged for UIUC faculty and students, as well as for Illinois farmers, extension advisers, agriculture teachers and agribusiness representatives. These groups and individuals will be able to come to Egerton College for short courses and learn more about Kenya, its agricultural development, its culture and people," Nicholaides said.

"Reciprocal visits by Egerton students and faculty, Kenyan farmers, extension officers and teachers desiring

to learn more about U.S. agriculture also will occur during and beyond the five-year program," he added.

Under the IDAT project provisions, comprehensive four-year degree programs will be implemented at Egerton College in the key areas of agricultural education, extension and home economics. The expanded curriculum also will place greater emphasis on agricultural outreach and continuing education programs.

"The long-term institutional needs of Egerton College are two-fold," Nicholaides said. "Its leadership seeks to build a regional agricultural university of recognized excellence for the training of agricultural manpower, and to apply knowledge and technology to produce stable, equitable growth in Kenya and the East African region."

The IDAT project design team from the UIUC departed for Kenya on May 8 to begin the initial phase of the five-year collaborative project. Team leader is **Burton E. Swanson**, UIUC professor of international agricultural education and associate director of INTERPAKS, the International Program for Agricultural Knowledge Systems.

Other IDAT team members involved in the initial phase of the project include **Eldon L. Johnson**, UI vice-president emeritus and a senior adviser in the UIUC Office of International Agriculture since 1983; **John W. Santas**, assistant director for international training, UIUC Office of International Agriculture; **John E. Terwilliger**, director of computer services, UIUC College of Agriculture; **Roger L. Courson**, professor and head of the Vocational Agriculture Service, UIUC College of Agriculture; **Thomas A. McCowen**, associate director, UIUC Office of International Agriculture; **Warren K. Wessels**, assistant dean of resident instruction, UIUC College of Agriculture; and **Mildred B. Griggs**, professor and chairperson of the home economics education division, UIUC College of Education.

"The obvious global dimension of today's agriculture underlines the critical importance of this new project," Nicholaides concluded. "I am confident that both the UIUC and Illinois agriculture as a whole will benefit from expanded institutional ties in Kenya."



UIUC chancellor **Thomas E. Everhart** (far right) is shown presenting a framed print of the Morrow Plots to **Dawson Mlamba**, chairman of the Board of Trustees for Egerton College, Ngoro, Kenya. Mlamba headed a contingent of Egerton College officials who recently visited the Urbana-Champaign campus to evaluate the UIUC program proposal for IDAT, a five-year, \$5 million institutional collaboration project funded by the U.S. Agency for International Development.

Successful Ag Telemarketing Effort Yields \$93,000 in Alumni Pledges

A highly successful College of Agriculture telemarketing effort was completed in February, producing more than \$93,000 in pledges from its agricultural alumni.

Telephone calls by students were directed to agricultural alumni who had not contributed at the Deans Club level (\$100 or more in annual support) during the past two years. Many of those called responded with unrestricted gifts to the College, while others targeted their financial support to scholarships, library resources, special programs, or other needs within specific departments.

Kenneth Gorden, chairperson of the administrative committee for the College of Agriculture Development Fund, also wrote letters to those who were contacted by phone, urging their personal and financial support for the College.

According to **Bernard M. Heisner**, associate director of the College's Office of Resource Development, a total of 1,924 agricultural alumni pledged \$86,663 to programs and departments of their choice. Matching gifts from employers added \$6,775, bringing the total pledge amount generated by the February campaign to \$93,438.

A similar telemarketing effort was directed to the College's home economics alumni in late April and May, Heisner said. Before being called, these individuals also received a letter from **Betty Church**, home economics representative on the Ag Development Fund administrative committee.

Suggested areas for gifts from home economics alumni included student activities, scholarship and fellowship support, the child care resource center, the historic costume collection, or unrestricted support. Results of this recent telemarketing effort with home economics alumni are not yet available.

John Deere Foundation Funds Ag Fellowship, Scholarship

The John Deere Foundation, Moline, Ill., has recently contributed the sum of \$7,500 to the UI Department of Agronomy to fund a graduate fellowship in soil management for 1986-87. According to department head **Lawrence E. Schrader**, a recipient for the new graduate fellowship award will be selected prior to the beginning of the upcoming fall semester.

The foundation also has funded a \$1,000 merit scholarship to be given to an outstanding senior enrolled in the agricultural engineering curriculum at the U of I. The recipient of the John Deere Foundation Scholarship for 1986-87 is **Thomas J. Crowell**, Peoria.

Crowell currently is completing his junior year in the five-year agricultural science/agricultural engineering curriculum, specializing in the power and machinery field. He is a 1983 Jonathan Baldwin Turner Scholar and won the 1984 American Society of Agricultural Engineers "Sophomore of the Year" Award for outstanding academic achievement and exceptional professional promise in his field.

Campbell's Comments

by John R. Campbell, Dean



Spring has traditionally been known as a time of rebirth, of new beginnings. As nature once more blossoms forth in its eternal cycle of creativity and new growth, it is a good time to reaffirm our commitment to excellence. This spring season marks several new beginnings for the College of Agriculture, having what we hope will be positive ramifications for students, faculty, and clientele alike.

For our continuing students, spring represents a time for reflecting on new knowledge and skills gained during the past academic year, as well as charting new directions for the months ahead. For our outstanding group of new graduates, however, it is a time for culminating several years of intensive study and launching forth on the even greater challenge of a professional career. I know the College's faculty, staff, and alumni join with me in wishing our 1986 graduates much personal and professional success in their future endeavors.

New beginnings also are readily apparent in the planned administrative changes for the School of Human Resources and Family Studies. As noted elsewhere in this issue of *AgriView*, comprehensive plans are now being developed to centralize the School's administrative structure and to convert its four existing academic departments into program divisions. I heartily concur with acting SHRFS director **Coby B. Simerly** in identifying the current situation as a "window of opportunity," a time for facilitating greater efficiency and flexibility in the School's administrative structure, while ensuring the integrity of its teaching, research, and extension programs.

The symbolic ground-breaking for the College's new plant sciences complex, held on April 28, constitutes yet another new beginning for many of our plant scientists—the initial phase of a sophisticated new facility which can support state-of-the-art research well into the 21st century. As emphasized by UI president **Stanley O. Ikenberry**, "This is truly a revolutionary facility for teaching and research for the citizens of Illinois," capable of providing major economic and scientific benefits at a time when "agriculture and hi-tech are synonymous."

New beginnings frequently transcend state and even national boundaries, and may indeed have global implications and effects, as well. The recently signed institutional collaboration agreement with Egerton College in Kenya provides a meaningful opportunity for Illinois agriculturalists to better understand and participate in the agricultural development of a distant land of great importance. And, like the cooperative agreement established with China's Liaoning Academy of Agricultural Sciences in 1984, this new linkage also can facilitate the transfer of scientific information and technology which is beneficial to Illinois agriculture and the citizens it serves.

SHRFS To Undergo Administrative Change

A major change in the administrative structure of the School of Human Resources and Family Studies (SHRFS) was formally approved at the April 4, 1986 faculty meeting of the College of Agriculture.

If the organizational plan receives final approval from the UI Board of Trustees, the four existing departments of the School will become program divisions effective August 21, 1986. The SHRFS director will assume overall administrative responsibility for the unit, with program leadership in each division to be provided by an elected chairperson.

Current SHRFS departments, all of which will become program divisions when the new plan is fully implemented, include Family and Consumer Economics, Foods and Nutrition, Human Development and Family Ecology, and Textiles, Apparel and Interior Design.

A faculty transition committee chaired by **Sara U. Douglas**, assistant professor of textiles and apparel, has been appointed to identify policy and procedural issues which need to be addressed as a result of the administrative change. Other members of the transition committee include SHRFS faculty members **Judy S. DeLoache**, **Frances M. Magrabi**, **Adria R. Sherman**, and **Joseph L. Wysocki**.

The planned administrative reorganization in the School will not affect its ongoing teaching, research, and extension programs or curricula. When fully implemented, however, the new administrative structure is expected to reduce the School's full-time equivalent (FTE) administrators from three to one and significantly decrease the amount of faculty time currently devoted to committee activities. The larger administrative unit also will enable the School to centralize its various administrative and managerial functions and allocate its resources more flexibly and efficiently.

According to **Coby B. Simerly**, acting SHRFS director, "The new administrative structure will retain a strong focus on the well-being of individuals and families. It will be supportive of the UI Cooperative Extension Service mission, consistent with the ongoing research and teaching programs of the School, and responsive to home economics alumni and other constituent groups."

The recently approved administrative change resulted, in part, from a UI Council on Program Evaluation (COPE) evaluative report on the School in spring, 1985. The COPE report recommended restructuring and simplifying the School's overall administrative and governance structure to achieve optimum use of its available human and monetary resources.

An *ad hoc* review committee subsequently was appointed by College dean **John R. Campbell** to review the final COPE report and to propose possible alternative administrative structures for the School. This committee was chaired by **Donald K. Layman**, professor of nutrition, and also included faculty members and administrators **Judy S. DeLoache**, **Sara U. Douglas**, **William L. George**, **Mildred B. Griggs**, **Frances M. Magrabi**, **Adria R. Sherman**, **Coby B. Simerly**, **Marjorie A. Sohn**, and **Joseph L. Wysocki**.

Four alternative plans were developed during fall, 1985 and presented to the SHRFS faculty for discussion and consideration in early December. Preference ballots were then distributed to SHRFS faculty members, as well as to Cooperative Extension program specialists in home economics and to home economics education faculty.

The balloting indicated faculty support for three of the four alternative administrative structures, with a slight preference for the divisional organization. Dean Campbell and the associate deans of the College endorsed a School having four program divisions in late December; and the proposal was then formally submitted to the entire College faculty for consideration and approval.

Target date for implementing the new SHRFS administrative structure is the beginning of the fall semester, 1986. A nationwide search is currently ongoing to recruit a permanent director for the School prior to August 21.

Acting SHRFS director **Simerly** views the administrative change as an exciting "window of opportunity" for the School. "Periodic external evaluation and self-examination are healthy and indeed essential to continued growth and development. We enthusiastically take this opportunity to create an organizational structure that will further enhance and strengthen our home economics programs, reduce administrative costs, and provide more efficient use of faculty time and administrative resources."

"Home economics as a field of study is changing rapidly, and new opportunities unfold daily," **Simerly** emphasizes. "With the demonstrated excellence and dedication of our faculty and staff, the great enthusiasm of our students, and the continued moral and financial support of our alumni and friends, we can look forward to a promising future."

Helfrich Scholarship Established In Ornamental Horticulture

Georgia Andrews, a UI sophomore in ornamental horticulture, is the first recipient of the new **Karl F. and Frances A. Helfrich Scholarship**. A scholarship endowment was recently established by the Helfrich family to recognize academic excellence and leadership activities among ornamental horticulture majors at the University of Illinois. Selection criteria for the \$500 merit award also include special consideration for immigrants or their sons and daughters who are enrolled in the ornamental horticulture curriculum.

Karl Helfrich was a native of Germany and immigrated to the United States in 1929. He was active in the florist business in Champaign and Paris, Ill. for many years and served as secretary-treasurer of the Florist's Telegraph Delivery Association from 1957 to 1960.

Andrews is the daughter of Mr. and Mrs. **Markos Andrews**, Chicago. She was valedictorian of her graduating class at Steinmetz High School and served as president of the National Honor Society chapter and Key Club. At the University of Illinois, she is active in the Horticulture Club.

Faculty Research Grants

The following research grants have been awarded to faculty members of the College of Agriculture for start-up dates from July 1, 1985 through April 1, 1986. Parenthesized information indicates the awarding organization or agency, the total dollar amount of the research grant, and its duration.

Dale A. Law and John E. Smith, Vocational Agriculture Service, "Vocational Education Service—A Model System for Continuous Dissemination of Technical Teaching Aids and Delivering Inservice Education" (*Illinois State Board of Education*, \$136,000, 7/1/85 to 6/30/86).

Angus C. Hepburn, Department of Agronomy, "Study of the Relationship Between DNA Methylation and Conformation and Plant Gene Expression" (*Campus Research Board*, \$5,500, 11/1/85 to 6/1/86; and *Biomedical Research Board*, \$6,000, 11/1/85 to 3/31/86).

John S. Titus, Department of Horticulture, "Rockefeller Foundation Biotechnology Career Fellowship" (*Rockefeller Foundation*, \$34,000, 12/1/85 to 2/28/89).

John A. Juvik and David B. Dickinson, Department of Horticulture, "Clarification of the Genetic Nature of Sugary Enhancers on the Endosperm Character of Sweet Corn" (*American Seed Research Foundation*, \$24,000, 12/15/85 to 12/14/89).

Dale A. Law and John E. Smith, Vocational Agriculture Service, "Determining Employment Opportunities in Illinois Agriculture" (*Illinois State Board of Education*, \$3,000, 12/1/85 to 3/1/86).

Angus C. Hepburn, Department of Agronomy, "Control of Expression of the Peroxidase Gene Family With Particular Reference to Stress and Environmentally Induced Variation" (*Campus Research Board*, \$15,000, 1/1/86 to 6/30/86).

Donald P. Briskin, Department of Agronomy, "Molecular Aspects of Membrane Transport in Higher Plants" (*Beckman Award/Campus Research Board*, \$24,000, 1/1/86 to 6/30/86).

Theodore Hymowitz, Department of Agronomy, "Development of Gene-Cytoplasmic Male Sterility in Soybeans" (*Agrigenetics Research Corp.*, \$100,000, 1/1/86 to 12/31/87).

Jack M. Widholm, Department of Agronomy, "Soybean Somatic Cell Genetics" (*Agrigenetics Research Corp.*, \$100,000, 1/1/86 to 12/31/87).

Daniel Gianola, Department of Animal Sciences, "Development of Methods for Genetic Analysis of Discrete Traits of Economic Importance in U.S. and Israeli Dairy Cattle Populations" (*Bi-National Agricultural Research and Development Fund*, \$200,000, 1/1/86 to 12/31/88).

John A. Milner, Department of Food Science, "Selective Inhibition of DMBA-DNA Adducts by Selenium Supplementation" (*American Institute for Cancer Research*, \$98,262, 1/1/86 to 12/31/87).

Peter J. Bechtel and Jan E. Novakofski, Department of Animal Sciences, "Isolation and Characterization of Anabolic Factors From Hypertrophying Skeletal Muscle" (*Eli Lilly Co.*, \$70,730, 1/1/86 to 12/31/88).

Carl M. Parsons, Department of Animal Sciences, "Utilization of Corn Gluten Feed and Corn Germ Meal by Commercial Laying Hens and Pullets" (*Corn Refiners Association*, \$11,000, 1/1/86 to 12/31/87).

Lowell D. Hill and Marvin R. Paulsen, Department of Agricultural Economics, "State Certification of Grain Quality" (*Illinois Soybean Program Operating Board*, \$10,000, 1/27/86 to 1/26/88).

Adria R. Sherman, Department of Foods and Nutrition, "Acceptance, Tolerance and Iron Adequacy of Milk-Based Infant Formula in Normal Infants to Age One Year" (*Mead Johnson Co.*, \$24,254, 1/31/86 to 5/31/87).

Sarahelen R. Thompson, Department of Agricultural Economics, "Determinants of Liquidity and the Role of the Market Maker in Commodity Futures Markets" (*Center for the Study of Futures Markets*, \$5,000, 1/1/86 to 12/31/87).

Luis R. Zavaleta, Department of Agricultural Economics, "Economic Analysis of Costs and Benefits of Pest Control" (*U.S. Environmental Protection Agency*, \$20,000, 1/1/86 to 12/31/88).

Harold W. Gonyou, Department of Animal Sciences, "Pre-Partum Behavior of Ewes" (*Illinois Sheep and Wool Marketing Program*, \$2,000, 2/1/86 to 1/31/87).

Donald G. White and Barry J. Jacobsen, Department of Plant Pathology, "Fungicidal Grain Protectants to Improve Grain Quality by Prevention of Storage Molds and Expanding the Use of Low-Temperature Drying" (*Illinois Corn Marketing Board*, \$61,000, 2/21/86 to 2/20/88).

Donald P. Briskin, Department of Agronomy, "Mechanisms for Nitrate Uptake and Compartmentation in Higher Plant Cells" (*McKnight Foundation*, \$105,000, 3/1/86 to 2/28/89).

Ion C. Baianu, Department of Food Science, "Value-Added Corn Through Improvement of Corn Gluten Functionality for Foods" (*Illinois Corn Marketing Board*, \$78,540, 3/21/86 to 3/20/89).

Hans P. Blaschek, Department of Food Science, "Genetic Amplification of Alpha-Amylase in *Clostridium Acetobutylicum* SA-1 for Improved Conversion of Corn Starch to Butanol" (*Illinois Corn Marketing Board*, \$30,580, 3/21/86 to 3/20/87).

Fred E. Below and L. Frederick Welch, Department of Agronomy, "Factors Affecting High Yields of Maize and Soybeans" (*Potash Corporation of Saskatchewan*, \$15,000, 4/1/86 to 3/31/87).

Thomas J. Bicki and Allan Felsot, Department of Agronomy, "Influence of Tillage System and Water Management Practices on Leaching of Alachlor, Cyazine, and Carbofuran in Sandy Soil" (*North Central Region—Pesticide Impact Assessment Program*, \$20,154, 4/1/86 to 3/31/89).

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Faculty Awards and Honors

David H. Baker, professor of comparative nutrition, was honored by the American Institute of Nutrition in mid-April with its 1986 Borden Award in Nutrition. The award, which consists of an engraved plaque and a \$1,000 prize, recognizes "distinctive contributions to knowledge on the nutritional significance of any food or food component."

Baker was cited for his major research studies on amino acid requirements and interrelationships with minerals and other dietary components in nonruminant animals. He also has developed purified amino acid diets that are widely used in evaluating nutrient-nutrient and drug-nutrient interrelationships in nonruminants and are of considerable economic importance in animal production. Baker has authored more than 240 scientific publications on animal nutrition subjects and is the recipient of nine major research awards in his field.

Donald P. Briskin, assistant professor of plant physiology, was recently awarded a \$105,000 McKnight Foundation research grant to pursue his studies in "Mechanisms for Nitrate Uptake and Compartmentation in Higher Plant Cells." Briskin was one of ten gifted young scientists nationwide who were selected to receive the prestigious research award, based on their outstanding research potential, publication record, and proposed research activities.

The McKnight Foundation award is given on a competitive basis to individuals who have conducted independent research for a period of more than two years but less than six years following completion of their postdoctoral studies. Briskin completed his doctorate at the University of California-Riverside in 1981 and has been a member of the UI agronomy faculty since 1985.

Marvin P. Bryant, professor of microbiology, is the 1986 recipient of the Fisher Scientific Company Award for Applied and Environmental Microbiology. The award is annually given by the American Society of Microbiology. Bryant was cited for his pioneering research achievements in rumen microbiology, anaerobic microbiology, and anaerobic ecosystems. His recent research has focused on the syntrophic associations of species involved in the anaerobic degradation of long-chain fatty acids and aromatic compounds.

John R. Campbell, dean of the College of Agriculture, was formally honored April 8 with the Gamma Sigma Delta International Award for Distinguished Service to Agriculture. The prestigious award is annually presented to a distinguished Gamma Sigma Delta member who has contributed significantly to agriculture at the national or international level during the preceding five years. Recipients are selected from the international membership of Gamma Sigma Delta, the honor society of agriculture.

Campbell was cited for his many long-term contributions to agricultural education, research, and public service, both within the United States and abroad. He

planned and initiated the highly successful Jonathan Baldwin Turner (JBT) Agricultural Merit Scholarship Program and the JBT Undergraduate Research/Scholarship Program in the College. These student recruitment and professional development programs have since served as models for similar programs at other agricultural institutions in the U.S. and Canada. Campbell was instrumental in the recent establishment of the JBT Graduate Fellowship Program and has been a strong proponent of increased federal support for graduate education in the agricultural sciences.

Campbell also was recognized for his contributions to the UI Food for Century III capital program for food-production research and for his strong support for international agriculture programs in the College. He has recently made several international trips to promote institutional ties and scientific cooperation with agricultural universities abroad, including high-level visits to India, Japan, the People's Republic of China, Zambia, and Kenya. While on an Illinois trade mission to the Far East in 1984, he obtained a formal agreement to exchange plant and animal germplasm, faculty and students, and scientific information with a "sister" institution in China, the Liaoning Academy of Agricultural Sciences.

The award, which was presented at the Illinois chapter's 1985-86 initiation and recognition banquet in Urbana, included a plaque and a \$500 prize.

Marvin C. Carboneau, professor of ornamental horticulture extension, has been named 1986 "Man of the Year" by the Illinois State Florist Association. He was presented with an award plaque from the ISFA board of directors at the statewide association's 1986 spring convention in March. Carboneau, who advises and assists the ISFA with its educational programs, was cited "for outstanding contributions to the florist industry in Illinois."

Roger L. Courson, professor and head of the College's Vocational Agriculture Service, was honored May 1 with the UIUC Excellence in Off-Campus Teaching Award. The award was presented at the annual campus instructional awards banquet in Urbana.

Courson was cited for his major role in integrating microcomputer applications and computer-based educational techniques with the vocational agriculture curriculum in Illinois. He developed the popular extramural course, "Teaching Applications of Microcomputers in Vocational Education," in 1981 and has since taught the computer-based course for vocational agriculture teachers, extension advisers, and others at 13 locations statewide. Courson also serves as the College's extramural courses coordinator and has developed 16 computer programs which are currently used by Illinois vocational agriculture educators in agricultural instruction and decision-making.

The extramural teaching award is annually given by the UIUC Office of Continuing Education and Public

Faculty Awards and Honors

Service to two faculty members who have designed and implemented effective educational strategies for adult nontraditional students in off-campus settings. It includes a \$1,000 cash award and a \$350 grant to the recipient's department for improving off-campus instruction and program development.

Stanley E. Curtis, professor of environmental physiology; **John W. Erdman**, professor of nutrition; and **Marshall D. McGlamery**, professor of weed science extension, were formally honored March 13 with the 1986 Paul A. Funk Recognition Award. The award is annually given by the Funk Foundation, Bloomington, Il., for outstanding professional achievements and major contributions to the betterment of agriculture through extension, teaching, research, and public service.

Each Funk Award winner received a certificate of recognition, an unrestricted personal award of \$2,000, and a \$500 recurring annual salary increment. The sum of \$1,000 also was presented to the respective academic departments of the three award winners to support their future programs and professional activities.

Margaret R. Grossman, associate professor of agricultural law, has been awarded a Fulbright research grant for the 1986-87 academic year under the Fulbright Senior Scholar Program. She will be conducting comparative research in the Netherlands, Great Britain, and the Federal Republic of Germany on western European legal policies and programs for farmland preservation. While in Europe, she will be associated with the Agricultural University, Wageningen, The Netherlands, and will be working under the auspices of the Western European Regional Research Program.

Gerhard W. Harpestad, associate professor of dairy extension, was recently recognized with the 1986 Outstanding Service Award of the National Dairy Herd Improvement Association. The service award was presented at the DHIA national convention in Atlanta.

Six College faculty members were recognized March 13 with the newly established College of Agriculture Faculty Award for Excellence. A Senior Faculty Award and a Young Faculty Award were presented for "outstanding professional achievement and demonstrated excellence" in each of the three categories of extension, research, and teaching.

The 1986 award recipients included **Ellery L. Knake**, professor of weed science extension (Senior Faculty Award in Extension); **Michael F. Hutjens**, professor of dairy extension (Young Faculty Award in Extension); **David H. Baker**, professor of comparative nutrition (Senior Faculty Award in Research); **John A. Milner**, professor of nutrition (Young Faculty Award in Research); **Ambrose W. Burger**, professor of crop production (Senior Faculty Award in Teaching); and **Donald L. Uchtmann**, professor of agricultural law (Young Faculty Award in Teaching).

Each of the six received a certificate of recognition and a \$500 recurring annual salary increment. The awards were formally presented by College dean **John R. Campbell** at the 1986 College of Agriculture Recognition Awards Program.

Raymond M. Leuthold, professor of marketing, is a 1986 recipient of the Burlington Northern Foundation's Faculty Achievement Award. Leuthold was one of three distinguished UIUC faculty members who were recognized for outstanding achievements in teaching and research and related professional honors received during the past year. The prestigious award, which included a \$3,000 prize, was presented at the May 1 UIUC instructional awards banquet in Urbana.

J. Kent Mitchell, professor of soil and water, has been honored with the 1986 Faculty Teaching Award of the Department of Agricultural Engineering. Mitchell was cited at the department's recent awards program for his effective classroom teaching and innovative uses of instructional materials and techniques. He prepared the proposal for the department's two-year IBM/EXCEL instructional project, "Graphic Workstations for Teaching Agricultural Engineering."

William L. Ogren, professor of plant physiology/USDA and an agronomy faculty member for the past 21 years, has been elected to membership in the prestigious National Academy of Sciences. He was recognized by the NAS for his pioneering research in photosynthesis, the process by which plants utilize sunlight to convert carbon dioxide into the sugars needed for plant growth and development. A major contribution was his discovery that ribulose biphosphate carboxylase, a primary enzyme in photosynthetic assimilation of atmospheric carbon dioxide to sugar, also catalyzes the first step in photorespiration. The latter process is energy-wasting and severely depresses the photosynthetic productivity of most crop plants.

The potential impact of this discovery is substantial, since experimental elimination of photorespiration increases the photosynthetic efficiency of most plants by 50 percent. Ogren also has devised procedures to create and identify plant strains with reduced photorespiration by altering their genetic composition. Because photorespiration is present in all major crop plants except corn, sorghum, and sugar cane, his findings have stimulated extensive research worldwide toward increasing crop productivity by genetic or chemical modification of the carboxylase enzyme.

Fred W. Slife, professor emeritus of weed science, was recently honored with the 1986 Outstanding Research Award of the Weed Science Society of America. The national award, which is annually given for outstanding career contributions to weed science research, was presented at the professional society's 1986 annual meeting in Houston, Texas.

Administrative Appointments

David B. Dickinson, professor of plant physiology, has been appointed head of the Department of Horticulture, effective February 21, 1986. He previously served as acting head of the department after **Herbert J. Hopen** left that position in May, 1985.

Dickinson is a native of New York City, N.Y. He earned a bachelor of science degree in horticulture at the University of New Hampshire in 1957 and subsequently completed a doctorate in horticulture at the University of Illinois in 1962. Dickinson has been a member of the UI horticulture faculty for the past 25 years and also holds a professorial appointment in the Department of Plant Biology, College of Liberal Arts and Sciences.

A prominent researcher, Dickinson is widely known for his work in carbohydrate metabolism of nonphotosynthetic plant tissues, pollen germination and respiration, and plant cell-wall biosynthesis. He was involved in the discovery and characterization of the maize endosperm mutation, *sugary enhancer*, which greatly increases the kernel sucrose content of sweet corn. Release of the sugary enhancer germplasm has had a beneficial effect on the sweet corn seed industry and consumption of various extra-sweet corn varieties. Dickinson also has conducted major research studies in the metabolism of phytic acid in soybean seeds.

Dickinson is affiliated with several professional organizations, including the American Society of Plant Physiologists, the American Association for the Advancement of Science, the American Society for Horticultural Science, the Botanical Society of America, and the Crop Science Society of America. He has served on the editorial board of the journal, *Plant Physiology*, and has been a member of the national executive committee for the ASPP.

M. E. Tumbleson, former professor of veterinary biomedical sciences in the University of Missouri College of Veterinary Medicine, has accepted a part-time (30%) appointment as assistant director of the UI Agricultural Experiment Station. Tumbleson will be responsible for coordinating the animal health research program within the Station. He also will serve as associate dean for research in the UI College of Veterinary Medicine.

Tumbleson is a native of Mountain Lake, Minnesota. He completed a bachelor of science degree in agricultural education in 1957, a master's degree in plant physiology in 1961, and a doctorate in biochemistry in 1964, all at the University of Minnesota. Tumbleson joined the University of Missouri-Columbia veterinary medicine faculty in 1966 as an assistant professor of veterinary physiology and pharmacology. Since 1980, he has been a professor of veterinary biomedical sciences and a research professor at the Sinclair Comparative Medicine Research Farm there.

Tumbleson's recent research has focused on the physiological and nutritional effects of chronic alcohol consumption in miniature swine models and applications to alcoholism in humans.

Tumbleson served as secretary-treasurer of the American Society of Veterinary Physiologists and Pharmacologists from 1974 to 1983. He is a charter member of both the World Association of Veterinary Physiologists, Pharmacologists, and Biochemists and the International Society for Biomedical Research on Alcoholism.

A Fellow of both the American Institute of Chemists and the Gerontological Society, Tumbleson also was honored with the Gamma Sigma Delta Distinguished Award in Research in 1980.

Faculty Activities

George F. Sprague, professor of plant breeding and genetics, recently served on a multidisciplinary task-force which prepared the latest Council for Agricultural Science and Technology (CAST) report, "Plant Germplasm Preservation and Utilization in U.S. Agriculture." Sprague was nominated for membership in the task-force by the Crop Science Society of America.

Lloyd M. Wax, professor of plant physiology/USDA, was recently elected national secretary of the Weed Science Society of America. He assumed his new position at the WSSA annual meeting in February. Wax earlier was named president of the North Central Weed Control Conference for 1986.

News items and other articles of interest to the College of Agriculture are solicited on a continuing basis. Submit all materials for possible inclusion in upcoming issues of AgriView to Joanne Courson, Office of the Dean, 101 Mumford Hall.



UI College of Agriculture professors John W. Erdman, Jr., Marshal D. McGlamery, and Stanley E. Curtis (l. to r.) were formally honored March 13 as the 1986 Paul A. Funk Recognition Award recipients.

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College of Agriculture/University of Illinois at Urbana-Champaign

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Project EXTRA To Promote Agricultural Expert Systems

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"Computerized artificial intelligence and expert systems are destined to become powerful management tools in future farm business operations," says **Donald A. Holt**, director of the UI Agricultural Experiment Station. And a number of programs are currently being implemented to speed the application of this sophisticated new technology by farm users in Illinois and the Midwest.

Holt is co-coordinator of a new project in the North Central Region to promote the use of decision-aid computer software, commonly known as "expert systems," in production agriculture. The primary objective of Project EXTRA (Expert Systems for Technology and Resource-Conservation in Agriculture) is to develop a comprehensive package of agricultural expert systems that will help farmers choose and manage farming systems that are both soil-conserving and profitable.

The project was initiated in 1985 with a modest annual budget of \$185,000, funded by the USDA-Agricultural Research Service. Its steering committee members include administrators from USDA-ARS, agricultural experiment stations, state cooperative research services, soil conservation organizations, and other public and private agencies in the 12-state North Central Region.

Project EXTRA represents a cooperative effort to introduce research-based expert systems to a broad spectrum of agricultural enterprises, Holt says. Participating agricultural scientists will program software with a problem-solving approach and the combined technical knowledge, judgment, and professional experience of top specialists in a particular field of expertise. The resulting individual expert system will then question the farmer-user in plain English about the specifics of his/her management situation, selecting questions that will lead most directly to logical solutions or a specific recommendation on particular management problems.

Although individual components in the total expert-systems package can readily be used to answer specific agricultural management questions, Holt emphasizes that the principal objective of Project EXTRA will be to assemble "field, enterprise, and farm-level packages," thus tailoring a powerful farm management tool for the unique needs of any user. Systems also must be developed to make the entire expert-systems package



UI plant pathologist James Sinclair (r.) and IlliNet software manager Douglas Walsten examine "Soybean Disease Diagnosis," an expert-system program now offered by the UI Cooperative Extension Service's IlliNet Office. Sinclair was co-developer of the prototype agricultural expert system for diagnosing major Illinois soybean diseases, which originally carried the title of PLANT d/s.

readily accessible, via computer downloading from mainframe computers or other means, to individual farmers, agricultural suppliers, bankers and farm lenders, farm consultants, Soil Conservation Service and Cooperative Extension personnel, agricultural researchers, educators, and other potential users.

Decision-aid software, although relatively expensive to develop, has already revolutionized management decision-making in many other industries and businesses, Holt says. Utilizing available technology and knowledge of artificial intelligence, agricultural scientists can now place state-of-the-art management assistance and decision-making aids at the user's fingertips. Holt notes that several prototype agricultural expert systems are already in existence, including one developed in the College.

PLANT/ds, a prototype expert system introduced by UI plant pathologists **James B. Sinclair** and **Barry J. Jacobsen** in 1984, was designed to aid the agricultural producer in soybean disease diagnosis. Holt notes that this expert system, which also involved collaborative

work by a UI computer specialist, was the first actual application of artificial intelligence to production agriculture.

To overcome the considerable cost of developing and placing a comprehensive expert-systems package on-line, Project EXTRA will call on the combined expertise of land-grant agricultural scientists and others who may already have experience in agricultural software development and/or those who may actually be working on expert systems for farm users. During early 1986, representatives of Project EXTRA presented several introductory seminars at North Central Region land-grant agricultural institutions. The primary objective of these meetings was to describe the overall project, identify prospective project participants, and demonstrate some prototype agricultural expert systems.

Current project plans call for the development of a comprehensive expert systems package that will contain more than 150 individual expert systems, each designed to answer a specific management question and/or help make a logical management decision. Proposals from agricultural scientists in the North Central Region for individual expert systems to be included in the project package are being solicited on an ongoing basis.

Holt stresses that the potential subject-matter for Project EXTRA expert systems is extremely broad-ranging, including but not limited to such critical management concerns as farmland use, conservation practices, machinery, tillage systems, cropping and pest management, soil fertility, livestock management and nutrition, risk management, agricultural finance, and commodity marketing.

To date, a total of 35 individuals and groups have agreed to participate in Project EXTRA. Holt notes that good progress has been made in developing a standard nomenclature for the project software. A planned handbook of common symbols and definitions will allow software developers to build interfaces among the various expert systems and between the expert systems and any particular farm spreadsheet/database or external database. This approach will standardize protocols and help foster efficient interchange of prototype software items among Project EXTRA participants and others.

Additional efforts are underway to establish a consortium of private firms and foundations which could partially support the central coordination of Project EXTRA, Holt says.

The administrative leadership in the College of Agriculture is presently developing another comprehensive program—*Operation CROSSROADS*—designed to bring the benefits of expert systems and computer-aided decision-making to agricultural users in Illinois. When implemented, this project would provide individualized management assistance to farmers, agribusinesses, and other users regionally and locally throughout the state.

Editor's Note: To obtain further information on Project EXTRA, interested College faculty members should contact Donald A. Holt, Office of the Director, UI Agricultural Experiment Station, 211 Mumford Hall (phone 217/333-0240).

SHRFS Takes on "New Look" With Administrative, Structural Changes

The School of Human Resources and Family Studies is moving ahead quickly to implement structural and administrative changes earlier approved by the full College of Agriculture faculty. Under the newly adopted plan, the School's four existing departments were restructured as program divisions effective with the beginning of the 1986-87 academic year.

The newly appointed SHRFS director, **Sharon Y. Nickols**, will now assume overall administrative responsibility for the entire unit. The move is designed to simplify the School's administrative and governance structure, centralize administrative tasks, and provide greater flexibility in resource allocation.

The planned administrative changes received the formal approval of the University of Illinois Board of Trustees at its July 10, 1986 board meeting. On August 4, the Illinois Board of Higher Education also approved the SHRFS reorganization as "a reasonable and moderate extension" of existing programs.

Each of the four newly organized program divisions—Family and Consumer Economics, Foods and Nutrition, Human Development and Family Ecology, and Textiles, Apparel, and Interior Design—will now have a divisional chairperson with responsibility for program coordination. Newly named divisional chairpersons include **Joseph L. Wysocki** (FACE), **Leann L. Birch** (HDFE), and **Marjorie E. Mead** (TAID). **Joseph Tobias** will serve as acting chairperson of the Foods and Nutrition division.

Sharon Y. Nickols, former professor of family economics at Oklahoma State University and director of the OSU Family Study Center, assumed her new position as SHRFS director on September 1, 1986. She succeeds **Coby B. Simerly**, who served as the School's acting director during the 1985-86 academic year.

Nickols hopes to build on the many current strengths of the School in implementing the new administrative structure. "We anticipate expanding those areas of our undergraduate degree programs where there is a high market demand for graduates, such as restaurant management and apparel merchandising. We also intend to build on the excellent research base in the School to enhance our graduate programs."

Overall, Nickols emphasized the importance of "actualizing the mission of the land-grant university" by integrating the research, teaching, and extension functions of the School. "I am placing high priority on fostering unity within the School and promoting greater visibility with various external audiences." Nickols added that she was delighted to see "the exceptionally strong support and interest" of SHRFS constituent groups.

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Campbell's Comments

by John R. Campbell, Dean



For many years, strategic planning techniques have been successfully employed by business and industry to devise effective growth strategies, to plot achievable future objectives, and to develop a positive course of action based on current and projected socio-economic trends. A recent strategic planning conference sponsored by the UI College of Agriculture once again confirmed the great theoretical and practical worth of such an approach.

On September 8-10, 1986, College faculty and administrators joined with prominent farm and agribusiness leaders from around the state to assess possible strategies and future objectives for Illinois agriculture, based on growing market competition at home and abroad. A related, but nevertheless critical concern, was the future role of the College in helping to revitalize the Illinois agricultural economy. The three-day conference, "The Future of Illinois Agriculture," provided a meaningful dialogue for its 115 participants and yielded a bountiful harvest of useful perspectives.

As noted elsewhere in this issue of *AgriView*, the conference participants favored some significant new directions for the state's agricultural enterprise that impact future College programs and technology transfer activities. The conferees advocated increased levels of applied agricultural research and technology transfer, particularly that directed to the development of new value-added agricultural products, markets, and management information. They also supported aggressive efforts to revitalize the rural economy and business climate, to provide effective management training for agricultural decision-makers, and to establish a computerized network for technology transfer and knowledge dissemination.

Implementing these strategies and achieving these future objectives for Illinois agriculture will require a dedicated, concerted effort — both by the UI College of Agriculture and the agricultural community as a

whole. However, we are currently seeing several new developments in the College that are clearly directed toward their fulfillment. I am pleased to report that the UI Board of Trustees has approved construction of the new Sponsored Research Center, where our own agricultural researchers can work hand-in-hand with private industry to develop new hi-tech agricultural products. Cooperative involvements with new entrepreneurial firms, expanded emphasis on product-oriented research and post-harvest technologies, and development of powerful new management tools such as those proposed under Project EXTRA — all represent significant first steps in the revitalization process.

I am equally pleased to report that Governor James R. Thompson will recommend to the fall session of the Illinois General Assembly that an "Illinois Center for Value-Added Agricultural Research" be established at the University of Illinois. The initial state funding for this timely program is expected to be \$500,000, and we are hopeful of matching this with equal support from the business and industry sector. The two major components of the new value-added center will be (1) crop processing and utilization, and (2) marketing, product differentiation, and co-product utilization. We will highlight this new research effort in the next issue of *AgriView*.

Among the most recent developments, a \$27 million appropriation for the planned UI Plant and Animal Sciences Research Center has received Congressional approval as part of the omnibus federal budget bill for the upcoming fiscal year. This sophisticated new facility, which should be completed by 1990, will house 40 or more major research programs in key biotechnology areas.

We believe that research conducted at this new biotechnology center will mesh well with our other efforts to develop high-tech, value-added agricultural products, particularly the work at the new Sponsored Research Center and the planned "Illinois Center for Value-Added Research."

As we collectively look ahead to the many challenges and opportunities of the future, I wish to commend our dedicated faculty and staff for their many past achievements and to seek their continued guidance, counsel, and support.

Ag Library Awarded Federal Grant For "Agriculture Project"

The Agriculture Library recently received a two-year, federally funded grant to catalog and index selected USDA and state experiment station series publications in its collection. The ambitious cataloging and indexing effort, known as the "Agriculture Project," will be housed in Room 174 Bevier Hall.

After the project is completed, these difficult-to-locate publications will be searchable on the Online Catalog by author, title, series number, and subject. This catalog information also will be incorporated in the National Agricultural Library's database (AGRICOLA), in the Food and Agriculture Organization's database

(AGRIS), and in two commercial cataloging databases (OCLC and RLIN). According to agriculture librarian **Carol Boast**, the project will improve access and reduce the cost of access to these important agricultural publications for users worldwide.

During the first year of the Agriculture Project, the U.S. Office of Education is providing \$204,449 in funding support and the National Agricultural Library is providing an additional \$11,092. Funding for the second year will be negotiated in spring, 1987. Assistant librarian **Nancy Davis** is overseeing the project, which will employ two additional professional librarians, five graduate assistants, two clerk-typists and about ten undergraduate students. Persons seeking additional project information should contact Davis at 217/244-5802 or Boast at 217/333-9593.

Extension's RURAL ROUTE Program Assists Financially Stressed Farm Families



Call 1-800-847-6883

The RURAL ROUTE program continues to expand its efforts to serve the special needs of financially stressed farm families. During its first sixteen months of existence, more than 2,600 families entered the program through either telephone or personal contact. Extension advisers, serving as counselors, held over 3,000 meetings with these families. The advisers quickly became astute observers and listeners, since each family's needs are unique to their situation. In general, these are the kinds of assistance the RURAL ROUTE families most often needed:

- Help in preparing and analyzing financial statements
- Help in exploring alternatives for restructuring debt, cost containment, and off-farm employment
- Help in establishing farm and family goals
- Help in developing and implementing management plans
- Help in dealing with personal and family stresses and emotional needs

Contacts with RURAL ROUTE farm families soon revealed that many did not have the financial statements necessary for them to understand their true financial condition. To better meet this need, the "Your Financial Condition" workshops were offered. These workshops used materials produced by **Thomas L. Frey**, UI professor of agricultural finance, but the sessions were taught by county staff with the help of local volunteers—including lenders. More than 2,000 farm families participated during the winter of 1985-86, and some 5,000 families are expected to take part in similar workshops during the upcoming winter season.

In another effort, Extension specialists in home economics and farm management prepared comprehensive teaching materials for the "Farm and Family Business Management Workshops." These workshops are also taught by county staff with the help of local volunteers.

RURAL ROUTE has triggered the development of some new Extension approaches. Following a state-sponsored workshop on "Building Community-Based Support Systems" (October, 1985), county staff with the support of their volunteer councils developed a host of community and county activities to increase awareness and sensitivity to the emotional needs of financially stressed farm families. Churches, mental health agencies, farm organizations, lawyers, and lenders joined together to assess the most critical local problems and developed peer counseling activities, listening sessions, and other support groups to meet demonstrated local needs.

In addition to the RURAL ROUTE centers originally established in Macomb and Benton, Illinois, the UI Cooperative Extension Service has since opened centers at Dixon and Springfield. Expansion of these regional

centers has facilitated greater educational contact with farm families in various geographic areas around the state.

The RURAL ROUTE program is recognized as a responsive and effective program by participating families, farm organizations, the farm press, legislators, and the Office of the Governor. To date, the program has received a total of \$445,000 in one-time allocations, including \$200,000 to provide greatly expanded efforts in legal education. A \$500,000 recurring allocation, for 1986 and beyond, now affords a solid funding base for RURAL ROUTE.

The UI Cooperative Extension Service also has benefited in many ways. RURAL ROUTE renewed the field staff's enthusiasm and commitment and re-established the primary role of the Extension adviser as a teacher through one-to-one and small group contacts. The extension specialist's role as a *resource person* and a *teacher of teachers* has been reinforced.

County staff from all program areas have cooperated, resulting in mutual respect and a new appreciation of the collective subject-matter and skills strength within the organization. New networks have been formed to meet farm families' needs for social services, legal aid, job retraining, and community-based support systems. County staff members have developed expertise in new subject-matter, including farm financial analysis, farm resource management, and meeting the emotional needs of financially stressed families.

Peter D. Bloome, assistant state Cooperative Extension director for agriculture, natural resources, and community resource development, stresses the continuing importance of the UI Cooperative Extension Service as a research-based educational organization which is responsive to local and statewide human needs.

"RURAL ROUTE is a demonstration of the strengths of Extension—the flexibility to quickly bring the knowledge and resources of the University of Illinois College of Agriculture to bear on important problems. Once again we have made a very important difference in peoples' lives."

College to Launch Hi-Tech Sponsored Research Programs

A recent \$200,000 "incubator" grant from the Illinois Department of Commerce and Community Affairs (DCCA) will soon enable the College to work with fledgling, entrepreneurial companies to identify, develop, and market the most promising new products derived from hi-tech agricultural research.

The DCCA grant will be augmented by an additional \$450,000 from University sources to construct and develop a 14,000-square-foot Sponsored Research Center in the UI South Farms area. Bids to construct the shell for this new facility were accepted by the UI Board of Trustees at their October 9, 1986 meeting and actual construction will commence shortly. Target date for completion of the Center is late 1987.

The new facility will contain ten wet and dry laboratories and additional office space, permitting collaborative research and testing of prototype agricultural products under controlled conditions. The adjacent South Farms also will be utilized for field testing purposes.

According to **Donald A. Holt**, director of the UI Agricultural Experiment Station, sponsored research conducted at the planned Center will place particular emphasis on those products and procedures derived from agricultural biotechnology. Scientists working in this fast-moving field have already made significant advances with animal growth regulators and reproductive hormones, monoclonal antibodies, genetically engineered vaccines for controlling livestock diseases, environmentally safe herbicides and insecticides, disease- and pest-resistant crop species, and food bioprocessing techniques. Sponsored research is expected to speed agricultural product development in these and many related biotechnology areas.

"Entrepreneurial firms will benefit from the program by sponsoring contract research involving UI agricultural scientists and by establishing satellite research programs at the new Center," noted College dean **John R. Campbell**. "We believe that expanded product-oriented research will help make Illinois farmers more competitive in the world marketplace, create new employment opportunities, and contribute significantly to the state's economy."

Western Illinois Site Purchased For New UI Animal Research Unit

The University of Illinois recently purchased 191 acres of farmland adjacent to the present Orr Agricultural Research and Demonstration Center in Pike County for use as a western Illinois animal research unit. The College's Department of Animal Sciences will use the planned research facility to conduct a broad range of management and nutrition studies with beef cattle, including expanded work with pasture and forage crops utilization.

The new beef research program will be fully operational by 1988, complementing crop production research now conducted at the Orr Center by the UI Department of Agronomy. A cooperative arrangement with nearby John Woods Community College will permit JWCC students to use the new facility for instructional purposes.

Donald A. Holt, director of the UI Agricultural Experiment Station, emphasized that the newly acquired site is typical of about 10 million acres of farmland in western and southern Illinois and neighboring states. The region experiences extensive soil erosion, water pollution, and accompanying loss of soil productivity—problems which could be partially alleviated by increased emphasis on livestock and forage production. The region currently has the greatest concentration of beef cows in the state, as well as the greatest potential for expanded beef production.

Site-specific beef research conducted at the Orr Center is expected to be particularly beneficial to live-

stock producers in the region, Holt noted. At the same time, it will complement ongoing beef research programs at the UI South Farms and Dixon Springs Agricultural Center in southeastern Illinois.

An architect will be selected by mid-November for the project design work, and construction of the new facility is expected to begin by spring, 1987. Current project plans call for the construction of a multi-purpose headquarters complex, cow and calf lots, feed mixing and storage facilities, and haylage/silage storage. Also planned are several experimental pastures ranging from 5 to 9 acres in size. A permanent residence will be provided for the new facility's supervisor.

The animal research unit will support a herd of about 100 cross-bred cattle. Under an agreement involving the Departments of Agronomy and Animal Sciences, a portion of the original Orr Center acreage will be allocated for forage and pasture crops in exchange for some additional agronomy test plots to be located at the new site.

The Illinois General Assembly appropriated \$700,000 for the land purchase and site improvements in 1985, under the statewide "Build Illinois" bond program. Funds for the planned animal research unit were officially released by Governor James R. Thompson earlier this year.

SHRFS Telemarketing Effort Yields \$20,000 in Alumni Pledges

Alumni and friends of the School of Human Resources and Family Studies pledged nearly \$20,000 to the School during the 1986 SHRFS telemarketing campaign. More than 675 persons responded to student phone contacts and letters from **Betty Church**, home economics representative on the Ag Development Fund administrative committee, with targeted or unrestricted gifts.

Alumni pledges were directed to the Home Economics Alumni Fund, as well as to the Historic Clothing Collection, the Child Care Resource Center, the Home Economics Awards Fund (scholarships and fellowships), and the new Janice M. Smith Graduate Fellowship Fund. Additional pledges were made to each of the four program divisions in the School. This year marked the first time that a separate telemarketing effort was conducted with home economics alumni.

All persons giving at the Deans Club level (\$100 or more annually) will receive a walnut desk set featuring the "Betty Lamp," an internationally recognized symbol of home economics.

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UI Ag Faculty Help Develop New Illinois Alfalfa-Processing Industry

Statewide interest in creating new cash crops, marketing new value-added agricultural products, and promoting soil conservation measures has triggered the development of a promising new alfalfa-processing industry in western Illinois.

UI College of Agriculture faculty members have been working closely with Illinois Department of Agriculture officials, area farmers, and private investors to help establish new alfalfa dehydrating and cubing enterprises in Adams, Macoupin, and Morgan counties. Similar alfalfa-processing operations have been proposed for other selected locations throughout western and southern Illinois.

The energy-intensive processing operations will utilize low-grade natural gas available on-site as an economical energy source in producing cubed animal feeds. Forage growers within a 25 to 30 mile radius of the various processing plants will provide high-quality alfalfa under an annual contractual agreement.

The College's involvement with the proposed processing venture traces back to late 1984. Under a cooperative agreement with the Illinois Department of Agriculture, UI agricultural economist **Duane E. Erickson** and research assistant **Rosemary K. Mahoney** conducted a feasibility study to determine the economic potential of developing an alfalfa dehydration industry in Illinois. The results of this and related studies proved favorable; and entrepreneurial groups subsequently moved forward to seek needed investment capital for the new value-added agricultural enterprise.

The first of three planned alfalfa-processing plants, located in Liberty, Illinois, is scheduled to go into trial production by December of this year. The dehydration and cubing operation is being constructed by the Adams Pride Alfalfa Corporation with a mix of state and local business incentives and private investment.

The new Liberty plant will produce high-quality alfalfa cubes, measuring about 1¼" by 1¼" by 2" in size and containing about 22 percent available protein. The coarse-texture, long-fiber cubes will initially be marketed to the domestic horse industry, although they also are suitable for dairy cattle, swine, chickens, and other ruminant or monogastric animals. Market potential for the new product exists both within the United States and abroad.

Entrepreneurial firms plan to open similar processing plants at Gillespie (Macoupin County) and Franklin (Morgan County) in the near future, possibly as early as 1987. The proposed Franklin plant would combine the alfalfa dehydration and cubing operation with an ethanol distillation plant to produce multiple value-added agricultural products.

As planned, the Franklin processing plant would utilize corn gluten or dried distillers grain derived as a by-product in the ethanol distillation process to produce an alfalfa-corn gluten cube containing about 15 percent available protein. This complete, "balanced-ration" animal feed is particularly well-suited for dairy cattle and horses, but it also could be fed to other ruminant or

monogastric animals. The new Gillespie plant, which is currently nearing completion, also plans to produce the alfalfa-corn gluten cubes when its operations are under-way.

UI agronomy faculty and Extension field staff will provide ongoing technical and educational assistance to local contract growers producing high-quality alfalfa for the new industry. According to **Darrell A. Miller**, UI professor of plant breeding, a production level of 6 tons per acre annually has been established as "a reasonable and attainable goal" for the western Illinois contract growers. Average current alfalfa yields to the region range from 3 to 3½ tons per acre.

Initially, 6,000 to 12,000 acres of high-quality alfalfa will be required to support the part-year processing operation at Liberty, Illinois. Plant capacity at Liberty is expected to double in two to four years as new markets for the alfalfa cube are identified and developed.

Miller emphasized that contract forage growers will be required to observe specific processor recommendations regarding soil fertility, land preparation, crop management, weed control, and harvesting. "UI forage specialists and Extension field staff will be available to provide any needed technical or educational assistance to meet these processor guidelines," he added.

Miller already has participated in a number of educational and promotional meetings with prospective growers, processors, and investors and spoke at the dedication ceremony for the new Liberty plant.

An NIR (near-infrared) forage testing unit will be based at each processing plant to analyze incoming alfalfa for protein content and other quality factors. The plants will accept both chopped and baled hay during the harvest season, and custom operators will be available to harvest the crop for a predetermined charge. Future expansion of the various processing plants will likely result in a year-around dehydrating and cubing operation, with high-quality baled hay being purchased from forage growers further distant from the plant sites.

E. Everett Hatfield, professor emeritus of animal nutrition, developed the formulations for both the high-quality alfalfa cube and the balanced-ration, alfalfa-corn gluten version. He is enthusiastic about their dietary and nutritional value, noting that the coarse-texture, long-fiber cubes can meet the special dietary needs of both ruminant and non-ruminant animals. When fed to gestating sows, for example, the cubes have reduced the incidence of digestive tract ulcers and improved the sow's physiological well-being.

Hatfield now serves as a technical consultant to the Illinois Department of Agriculture, working with the statewide project in the areas of animal nutrition, product development, education, and marketing.

State officials also are highly enthusiastic about the prospects of marketing a major new value-added agricultural product, while at the same time promoting soil conservation and utilizing low-cost natural energy sources available around the state. **John Lehmann**, alternate fuels coordinator and hay utilization specialist with the Illinois Department of Agriculture, noted that there are at least 12 to 15 potential plant sites located

throughout western and southern Illinois where low-grade natural gas is available as an inexpensive energy source. Natural gas produced at these sites contains too many impurities to be suitable for pipeline transmission.

Lehmann, who has been involved in the development and promotional effort since 1985, stressed that the new industry is emerging at a time when export markets for Illinois corn and soybeans are rapidly dwindling and crop diversification is badly needed. "These processing enterprises will help build the Illinois forage industry, keep soil in place to meet mandated "T-by-2000" erosion-control tolerances, and provide a valuable new cash crop to aid the local and state economies."

Lehmann indicated that the alfalfa-corn gluten cubes can be marketed to both domestic and foreign dairy producers in deficit forage-production areas, while also disposing of sizable quantities of Illinois corn and corn by-products. Up to 55 percent of the balanced-ration cube by weight is composed of corn and corn gluten.

Likely future markets for the cubes include expanding dairy industries in Florida, Georgia, and other deficit forage-production areas throughout the United States. Rapid growth in dairy cattle numbers and milk production in many foreign countries, particularly in the Far East, also has created potential export demand for the high-quality cubed feeds.

The Illinois Department of Agriculture has identified excellent potential markets for the new value-added product in Japan, Korea, Taiwan, Jamaica, and Puerto Rico, among several foreign countries with growing dairy industries.

In addition to generating new cash crops and value-added agricultural products, the new alfalfa-processing industry also will boost efforts to establish continuous ground cover on some of the state's most erodible acreage. Recent studies indicate that some 900,000 acres of Illinois cropland currently in row crops will need to be converted to forage or pasture crops by the year 2000 to meet "T-by-2000" soil-loss guidelines.

College dean **John R. Campbell** cited the new industry as "an innovative and promising response" to Illinois agriculture's economic and environmental needs. "Faculty members in the College of Agriculture are proud to have had a significant role in the development of this new venture and look forward to future involvement as the industry grows."

College Establishes Harrison Memorial Award

The College of Agriculture recently established the Robert M. Harrison Memorial Award, which will be presented annually to the outstanding junior student in an agricultural curriculum. The prestigious award recognizes students who exhibit outstanding leadership traits, a sincere commitment to an agricultural career, and a meritorious record of academic achievement.

The new undergraduate award memorializes the late **Robert M. Harrison**, who devoted a lifetime of service to agriculture. A native of rural Dunlop, Illinois, Harrison enrolled in the UI College of Agriculture in 1929 and worked his way through school during the depression years. He was a member of Alpha Gamma Rho fraternity, president of the UI Athletic Council, and a member of Sachem and Ma-Wan-Da honoraries. Harrison graduated in 1934 and was named to Gamma Sigma Delta, the international honor society of agriculture.

Harrison served numerous agricultural organizations and businesses during his lifetime. He was employed by the Livestock Bureau of Armour & Company, the War Food Administration, and Westinghouse Electric's rural electrification program. For many years, he worked in advertising sales with such prominent agricultural magazines as *Successful Farming*, *Feedstuffs*, *Poultry Tribune*, and *Better Farming Methods*. Prior to his retirement in 1973, Harrison was employed by Pioneer National Title Insurance Company.

Harrison was a strong supporter of agricultural education and is remembered by many for his loyalty and service to the UI College of Agriculture. He was a member of the Ag Alumni Association's Board of Directors from 1976 to 1979 and more recently served on the Ag Development Fund administrative committee until his death in April, 1986.

Persons wishing to contribute to the Robert M. Harrison Memorial Award should send their donations to: **Robert M. Harrison Memorial Fund, 224 Illini Union Building, 1401 West Green St., Urbana, Illinois, 61801.**

Strategic Planning Conference Explores "The Future of Illinois Agriculture"

Improving the managerial abilities of agricultural decision-makers, creating and/or expanding markets for Illinois agricultural products, and providing adequate state funding support for applied agricultural research and technology transfer emerged as priority issues at a recent College-sponsored strategic planning conference on "The Future of Illinois Agriculture." Conference participants also advocated the development of new crops and livestock enterprises while reducing environmental risks to agriculture.

The three-day conference, held September 8-10 in Urbana, focused on the issue of growing market competition from other states and nations, as well as appropriate strategies which could be adopted to meet this serious challenge. Participating agricultural leaders—115 Illinois farmers, agribusiness and commodity group representatives, government officials, UI faculty members, and others—were asked to delineate specific objectives for a competitive Illinois agriculture and to explore possible strategies for achieving these objectives. The conferees also were asked to examine the future role of the UI College of Agriculture in promoting a healthy Illinois agricultural economy.

John R. Campbell, dean of the College, viewed the conference as an important first step in long-term efforts to revitalize Illinois agriculture and meet rapidly growing competition in the domestic and international marketplace. "The conference participants devoted long hours to grappling with the challenges facing our industry as a result of growing competition. The results of their deliberations provide us with a set of recommendations for achieving a more vigorous and competitive Illinois agriculture."

A number of the recommendations emerging from the conference's small-group meetings and plenary sessions dealt with the marketability of Illinois agricultural commodities and value-added products. The conferees advocated greater penetration of existing agricultural markets, creation of new markets, and development of new crops and livestock enterprises. Related recommendations included greater product differentiation (more diverse and higher value products) at the farm level and lowest cost production of agricultural products to meet changing "niche" markets.

The conference participants also endorsed other important strategies and objectives relating to the post-production phase of Illinois agriculture. These included improving the business climate for agricultural industries and processors, as well as encouraging the development of new entrepreneurial industries in rural areas.

The conference group determined that increased levels of applied agricultural research and technology transfer are needed to ensure the future well-being of Illinois agriculture. Conferees strongly endorsed line-item funding support in the state budget, earmarked for University-based agricultural research and Extension educational programming. They also recommended that R&D expenditures for Illinois agriculture be commensurate with those in other high-performance states and comparable industries, permitting expanded research efforts in agricultural product development and use.

Among related recommendations, the conference participants favored establishing a statewide computerized information network to link all components of the agricultural community and strengthening the technology transfer system to give a competitive edge to "early adopters." They also emphasized the need for "effective management skills training" for individuals in all phases of Illinois agriculture.

Five conference speakers analyzed various aspects of the existing agricultural crisis, emphasizing increased national and international competition in such key areas as agricultural production, exports of agricultural commodities and value-added products, and support for applied research and technology transfer.

Individual speakers appearing on the three-day program included **Dennis T. Avery**, chief agricultural analyst, U.S. State Department; **Nyle C. Brady**, senior assistant administrator, U.S. Agency for International Development; **Richard Durbin**, U.S. Congressman, 20th Congressional District, Illinois; **William J. Hudson**, manager of market research, The Andersons; and **Adlai Stevenson**, former U.S. Senator and now an Illinois gubernatorial candidate.

Faculty Research Grants

The following research grants have been awarded to faculty members of the College of Agriculture for start-up dates from February 21, 1986 through August 1, 1986. Parenthesized information indicates the awarding organization or agency, the total dollar amount of the research grant, and its duration.

Gary V. Johnson, John B. Braden, and Aziz Bouzaher, Department of Agricultural Economics, "Development of a Model for Analyzing and Implementing Illinois' Agricultural Nonpoint Source Pollution Control Program" (*Illinois Department of Energy and Natural Resources*, \$60,433, 2/21/86, to 2/20/88).

Stephen K. Farrand, Department of Plant Pathology, "Engineering Competitive Soybean Rhizobia" (*Illinois Soybean Program Operating Board*, \$52,221, 2/21/86 to 2/20/89).

Lowell D. Hill et al., Department of Agricultural Economics, "Motion Picture Program on U.S. Grain Standards and Corn Quality in Export" (*Illinois Corn Marketing Board*, \$14,520, 3/26/86 to 9/30/86).

Floyd K. McKeith, Peter J. Bechtel, Tom R. Carr, and Jan E. Novakofski, Department of Animal Sciences, "Red Meat and Poultry Surimi-Process Technology and Product Development" (*Illinois Corn Marketing Board*, \$50,002, 3/28/86 to 3/27/88).

John W. Erdman and W. D. O'Brien, Department of Food Science, "Ultrasonic Propagation Properties in Intact Tissue" (*National Cancer Institute*, \$164,721, 4/1/86 to 3/31/87).

Stephen C. Schmidt, Department of Agricultural Economics, "Export Opportunities for High-Valued Agricultural Products" (*U.S. Department of Agriculture*, \$65,000, 4/7/86 to 12/31/87).

Lowell D. Hill, Department of Agricultural Economics, "Analysis of Cooperative Grain Movement Patterns in the United States" (*U.S. Department of Agriculture*, \$30,000, 4/16/86 to 12/31/87).

Steven T. Sonka, Steven E. Hollinger and Peter J. Lamb, Department of Agricultural Economics, "Design of Growing Season Climate Forecasts for Midwestern Agriculture" (*National Science Foundation*, \$130,000, 5/1/86 to 5/1/88).

Wayne L. Banwart, Department of Agronomy, "Rain Exclusion With Herbicides" (*FMC Corporation*, \$22,527, 5/1/86 to 4/30/87).

Barbara P. Klein, Department of Foods and Nutrition, "Correlation of Consumer Sensory and Instrumental Evaluation of Roast Beef Texture" (*Illinois Beef Council*, \$13,775, 5/1/86 to 4/30/87).

Allan S. Felsot and Donald E. Kuhlman, Office of Agricultural Entomology, "Regional Variations in Susceptibility of Corn Rootworm Larvae to Soil Insecticides and Possible Development of Resistance" (*North Central Region—Pesticide Impact Assessment Program*, \$15,500, 5/1/86 to 4/30/87).

J. Kent Mitchell, Department of Agricultural Engineering, "Model Study of Block-Lined Chute Grade Stabilization Structures" (*U.S. Department of Agriculture*, \$3,446, 5/1/86 to 9/30/86).

Robert A. Easter, Department of Animal Sciences, "Effect of Laidlomycin Propionate on Growth and Feed Efficiency of Growing-Finishing Barrows" (*Syntex Research*, \$15,600, 5/15/86 to 12/31/87).

William G. Ruesink, Office of Agricultural Entomology, "Analysis of Soybean Production/Protection Systems and Research Needs in the North Central Region" (U.S. Department of Agriculture, \$50,000, 6/1/86 to 5/31/87).

Walter D. Lembke, Charles W. Boast, and Carroll J. W. Drablos, Department of Agricultural Engineering, "Nutrient Loss to Groundwater Under Fertilized Row Crops with Water Table Control in Central Illinois" (U.S. Geological Survey/Water Resources Center, \$32,235, 6/1/86 to 5/31/87).

Emil M. Orozco, Department of Agronomy, "Transcription of Plastid Protein-Coding Genes" (U.S. Department of Agriculture, \$110,000, 7/1/86 to 6/30/88).

Dale A. Law and John E. Smith, Vocational Agriculture Service, "Vocational Education Service—A Model System for Continuous Dissemination of Technical Teaching Aids and Delivering Inservice Education" (Illinois State Board of Education, \$258,000, 7/1/86 to 6/30/87).

D. Eugene Alexander, Department of Agronomy, "Breeding High Protein-Oil Maize" (United States-Spain Joint Commission, \$89,688, 7/1/86 to 12/31/88).

Keith W. Kelley, Department of Animal Sciences, "Endocrine Regulation of the Immune System" (U.S. Department of Agriculture, \$200,000, 7/1/86 to 6/30/89).

Richard L. Farnsworth, John B. Braden, and Gary V. Johnson, Department of Agricultural Economics, "Analysis of Lake Water Quality Improvement by Paying Farmers to Abate Nonpoint-Source Pollution" (Water Resources Center, \$53,190, 7/1/86 to 6/30/88).

Donald P. Briskin, Department of Agronomy, "Structure, Mechanism, and Regulation of Plant Plasma ATPase" (U.S. Department of Agriculture, \$104,000, 7/1/86 to 6/30/88).

Jan E. Novakofski, Department of Animal Sciences, "Expression of Oncogenes in Cardiac Muscle" (Illinois Heart Association, \$14,426, 7/1/86 to 6/30/87).

Mark B. David, Department of Forestry, "Evaluation of the Forest Floor and Mineral Soils Along a Lake States Sulfate Deposition Gradient for Sulfur, Nitrogen, and Carbon" (U.S. Department of Agriculture/Forest Service, \$44,795, 7/1/86 to 12/31/87).

Robert G. Darmody, Department of Agronomy, "Effects of Coal Mine Induced Subsidence on Agricultural Soils" (Illinois State Geological Survey, \$81,627, 7/1/86 to 6/30/87).

Gilbert R. Hollis, Department of Animal Sciences, "Integrated Health Management for Confined Swine" (U.S. Department of Agriculture, \$73,520, 7/5/86 to 5/31/87).

Stephen K. Farrand, Department of Plant Pathology, "Crown Gall Control: Plasmid Engineering to Maximize Control and Minimize Failure" (U.S. Department of Agriculture, \$24,945, 7/15/86 to 11/30/86).

Archie R. Portis, Department of Agronomy, "The Role of Thylakoid Membranes in Rubisco Activation"

(U.S. Department of Agriculture, \$83,000, 8/1/86 to 7/31/89).

Jack M. Widholm, Department of Agronomy, "Proline in Cold Tolerance of Regenerable Maize Callus" (U.S. Department of Agriculture, \$161,000, 8/1/86 to 7/31/89).

Edward G. Perkins, Department of Food Science, "Studies of the Mechanism of Grain Dust Suppression Using Soybean Oil Treatments" (American Soybean Association, \$10,000, 8/1/86 to 1/31/87).

Swanson Collection Enriches Agricultural Communications Documentation Center

An important collection of literature has been contributed to the Agricultural Communications Documentation Center which is being established in the College of Agriculture.

Harold B. Swanson, recently retired head of the Agricultural Journalism Department, University of Minnesota, has contributed his personal collection totaling 10 file drawers of materials, all carefully identified, filed, and indexed. The literature represents 40 years of collection effort.

"This set of about 1,200 documents may be the best existing personal collection of literature about agricultural communications," says professor **James F. Evans**, who has helped plan and establish the Documentation Center which is housed in the Office of Agricultural Communications and Extension Education. "The care involved in gathering and processing these materials from sources throughout the world is impressive. We greatly appreciate adding them to the Documentation Center."

The Swanson Collection will provide references for students and others who are interested in mass media and certain educational aids, especially as they affect rural and agricultural affairs. Some of the documents involve theoretical aspects of adoption, diffusion, and communication. Other major parts of the collection are organized according to elements of the communication process: sources, messages, channels/media, receivers, and effects. The collection also is strong in the subject-matter areas of communications planning, communications in agricultural development, and communications research methods.

Documents in the collection range from fact sheets to books, and many can be found nowhere else. Examples include some speeches, departmental series, special reports, and student research papers.

According to Evans, the Swanson Collection brings the total collection of the computer-based Agricultural Communications Documentation Center to more than 6,000 documents in various stages of processing.

The Center was conceived about five years ago to help bring together the widely-scattered literature about agricultural communications. Plans call for it to "go public" within the next two years as a resource for agricultural communications students, teachers, researchers, and practitioners worldwide.

Faculty Awards and Honors

Several Extension faculty members were recently honored with 1986 Educational Aids Blue Ribbon Awards by the American Society of Agricultural Engineers. **Robert A. Aherin**, extension safety specialist, was cited in the category of slides, filmstrips, and transparencies for two educational aids, "Safe Chainsaw Operation" and "Safe Storage and Handling of Grain." **Donald G. Jede**, professor of farm structures extension, was recognized for two publications, *Heat Pumps* and *Planning and Managing Your Farm Business Center*. **Duane Erickson**, professor of farm management extension, co-authored the latter publication and also received an ASAE Blue Ribbon Award.

Arthur J. Muehling, professor of farm structures extension and **Leroy B. Biehl**, professor of veterinary research/extension, were co-winners in the extension methods category for their "Livestock Ventilation Workshop for Veterinarians." **Stephen L. Pearson**, extension assistant in agricultural engineering, and **Loren E. Bode**, professor of power and machinery extension, received the 1986 award for three publications, the *Illinois Pesticide Applicator Training Manual*, 39-3, *The Calibration of Air-Carrier Sprayers*, and *Equipment and Calibration: Granular Applicators*.

David H. Baker, professor of comparative nutrition, was recently honored with the 1986 American Feed Manufacturer's Award of the Poultry Science Association. The prestigious award, recognizing Baker's outstanding research achievements in poultry nutrition, consisted of a plaque and a \$1,500 prize.

David H. Baker, professor of comparative nutrition; **George C. Fahey**, professor of nutritional biochemistry; and **Michael J. Plewa**, professor of plant genetics, were formally designated 1986 University Scholars at the UI Foundation's annual meeting on October 10. The three were among nineteen distinguished faculty members on the UI Urbana-Champaign campus who were so honored.

The University Scholar designation includes a three-year award which may be used to purchase equipment, employ graduate research assistants, travel, or pursue scholarly activities. Baker was among a group of nine senior faculty members who received a three-year award totaling \$30,000; Fahey and Plewa were among a group of ten junior faculty members who received a three-year award totaling \$15,000. The University Scholars program was initiated in 1985 to help attract and retain outstanding faculty members at the University of Illinois.

Ambrose W. Burger, professor emeritus of agronomy, is a 1986 recipient of the Ensminger-Interstate Distinguished Teacher Award, given by the National Association of Colleges and Teachers of Agriculture. The coveted teaching award, which included a \$1,000 prize, was presented at NACTA's annual meeting in Ridgeway, Ontario in mid-June. Burger previously was

honored with the first UI College of Agriculture Faculty Award for Excellence in Teaching and the Honorary State FFA Degree.

Three Extension home economists from Illinois were recently honored with the Distinguished Service Award of the National Association of Extension Home Economists. County advisers **Shirley E. Camp**, McDonough County; **Mary E. Fouts**, Tazewell County; and **Evelyn A. Prasse**, Carroll County, received certificates of recognition for outstanding professional achievement and innovative educational programming. The awards were presented at the NAEHE annual meeting in Grand Rapids, Michigan on October 9.

Lois T. Mitchell, Rock Island County, was a recipient of the 1986 NAEHE Continued Excellence Award. The award recognizes Extension home economists who are actively involved in personal professional development and in promoting the personal development of others. **Karen C. Crowe**, an Extension EFNEP worker from Rock Island County, won the 1986 NAEHE Para Professional Award for her outstanding accomplishments with EFNEP.

James E. Corbin, professor emeritus of animal science, received the American Soybean Association's 1986 Scientific Research Award at the organization's annual meeting in July. Corbin's research involved fractionation, processing, and evaluation of different parts of the soybean and their utilization in pet foods. More than one million tons of soybean products are used in pet foods each year, and research is ongoing to achieve optimal use of soybean fractions. Corbin and a co-researcher at Ralston-Purina, **Joe Vandepopuliere**, earlier developed the world's first extruded dog and cat foods. More than 95 percent of the world's dry-type pet foods are now manufactured by this method.

Earlier in the year, Corbin also was honored with the Land of Lincoln Soybean Association's Distinguished Service Award.

Roger L. Courson, professor and head of Vocational Agriculture Service, was honored by the Region 4 membership of the National Vocational Agriculture Teachers Association in late June with the association's Outstanding Service Award. Courson was recognized for his outstanding professional achievements and service to vocational and technical education in agriculture.

Several UI Cooperative Extension Service faculty members were honored at the 1986 annual meeting of the National Association of County Agricultural Agents, held in Colorado Springs, Colorado in early August. Recipients of the 1986 NACAA Distinguished Service Award were **C. Chris Doll**, area adviser, Region 7; **Robert W. Frank**, Jackson County; and **William T. McNamara**, Champaign County. "Search for Excellence" Award winners included **Dean R. Oswald**,

Faculty Awards and Honors

Henry County; **Richard E. Godke**, Mercer County; **Dennis R. Thompson**, Rock Island County; and **Rodney M. Weinzierl**, Tazewell County. Winner of the Lesco Turfgrass Horticulture Program Award for 1986 was **James E. Schuster**, DuPage County.

Roland F. Espenschied, professor of agricultural engineering, recently received the Distinguished Service Award of the National Food and Energy Council. The award was presented at the 1986 NFEC recognition program, held in Nashville, Tennessee in late July.

Espenschied was cited by the NFEC for his major impact on electrical education at the state, regional, and national levels. He has developed numerous electrical control kits, audiovisuals, and other educational materials that are widely used to demonstrate proper farm electrical wiring techniques and safety.

William L. George, professor of horticulture and associate dean of the College, has been elected a Fellow of the American Society for Horticultural Science. George was cited for his outstanding research in the genetics and breeding of vegetable crops, particularly cucumbers and tomatoes. He also was recognized for his dedication to excellence in undergraduate and graduate education, effective departmental and college administration, service to the Illinois and Ohio horticultural industries, and service to horticulture as a member of the society. George was formally honored at the 1986 ASHS annual meeting, held August 10-18 in Davis, California in conjunction with the XXII International Horticultural Congress.

Mahmood A. Khan, associate professor of food service management, was recently honored with the 1986 Donald K. Tressler Award for Research and Scholarship in Hospitality Education. The award was presented by the Council on Hotel, Restaurant and Institutional Education at its 1986 annual conference in Boston, Massachusetts. Khan also was recognized as the Council's "Research Scholar of the Year" for 1986.

William L. Ogren, professor of plant physiology/USDA, is a 1986 recipient of the Kettering Award for his pioneering research in plant photosynthesis. The prestigious award, which is given biennially by the Kettering Foundation, was presented at the annual meeting of the American Society of Plant Physiologists in Baton Rouge, Louisiana in June.

Joseph W. Pankau, assistant professor of health education extension, recently received the 1986 Distinguished Achievement Award of the American Society for Healthcare Education and Training (ASHET). The award was presented at the society's sixteenth annual meeting and conference, held in San Antonio, Texas during June. Pankau was formally recognized for his work in developing educational services for the health-care field and his professional contributions to ASHET at the local and national levels.

Roscoe L. Pershing, professor and head of the Department of Agricultural Engineering; and **Gene C. Shove**, professor of food process engineering, have been elected Fellows of the American Society of Agricultural Engineers. Pershing and Shove were formally honored at the ASAE's summer meeting, held at California State Polytechnic University, San Luis Obispo, during July.

Lawrence E. Schrader, professor and head of the Department of Agronomy, was elected a Fellow of the American Society for the Advancement of Science at the society's annual meeting in Philadelphia during late May. Schrader was cited for his outstanding research and research leadership in plant physiology, particularly in photosynthesis and nitrogen metabolism studies with corn and soybeans.

Among additional honors, Schrader was named president-elect of the American Society of Plant Physiologists at its 1986 annual meeting in Baton Rouge, Louisiana. Schrader, who served as secretary and program chairperson for the 3,000-member association in 1984 and 1985, will assume the ASPP presidency in 1987.

Three UI Cooperative Extension Service faculty members were formally honored by the U.S. Department of Agriculture in June for their high degree of professionalism and outstanding contributions to Extension educational programs. **Malcolm C. Shurtleff**, professor of plant pathology extension, received the USDA Distinguished Service Award for his work in the area of plant disease control. He has authored nearly 600 technical and popular publications and is internationally recognized for his many achievements as an Extension plant pathologist. Shurtleff is a Fellow of the American Phytopathological Society and a past recipient of both the Paul A. Funk Recognition Award and the Agricultural Science Award of Distinction.

Peter D. Bloome, assistant state Cooperative Extension director for agriculture, natural resources, and community resource development; and **Richard P. Kesler**, professor of farm management extension, were jointly honored with the 1986 USDA Superior Service Award for developing and coordinating the highly successful "Rural Route" program to assist financially stressed Illinois farm families.

Bloome, who has served as assistant state Cooperative Extension director since 1984, is a past recipient of the American Society of Agricultural Engineers "Distinguished Young Agricultural Engineer" Award. Kesler served as Extension leader of field staff for the Illinois Farm Business Farm Management organization from 1965 to 1979. He was previously honored with the Illinois Cooperative Extension Service's Sustained Excellence Award.

U.S. Secretary of Agriculture Richard E. Lyng presented the 1986 USDA awards during the federal agency's 40th Annual Honor Awards Ceremony, held June 4 in Washington, D.C.

Administrative Appointments

James F. Evans, professor of agricultural communications and journalism, has been appointed permanent head of the Office of Agricultural Communications and Extension Education (OACEE), effective August 21, 1986. He previously served as acting head of the Office of Agricultural Communications in 1969-70 and 1974-76 and was named acting head of the newly organized OACEE in 1985. Evans also has headed the College's teaching and research programs in agricultural communications since 1962.

A 1954 graduate of Iowa State University in agricultural journalism, Evans subsequently earned a M.B.A. degree in business administration and marketing at the University of Chicago in 1961 and a Ph.D. in communications at the University of Illinois in 1968. He has conducted evaluative research projects in several foreign countries and has published extensively in the areas of rural-urban communications, communications systems in agriculture, education in agricultural communications, and communications in agricultural development.

Evans has been active in several professional associations in the agricultural communications, journalism, and education fields, including Agricultural Communicators in Education (ACE), the National Association of Colleges and Teachers of Agriculture (NACTA), the National AgriMarketing Association (NAMA), and the American Agricultural Editors Association. He served as research co-editor for the *Ace Quarterly* from 1979 to 1981 and is a past member of the NACTA instructional media review board and the NAMA national careers committee.

A 1974 Paul A. Funk Recognition Award recipient, Evans also has been honored with the ACE Media Award of Excellence in Teaching and Research and the Alpha Zeta "Outstanding Instructor in Agriculture" Award.

Sharon Y. Nickols, former professor of family economics and director of the Family Study Center at Oklahoma State University, was appointed director of the School of Human Resources and Family Studies, effective September 1, 1986. She succeeds acting SHRFS director **Coby B. Simerly**, who will assume a new administrative position with the University of Nebraska-Lincoln on November 1.

A native of eastern Kansas, Nickols completed her B.S. degree in home economics education at Kansas State University in 1965. She subsequently earned a M.A. degree in family life education at Columbia University Teacher's College in 1967 and a Ph.D. in family economics and management at the University of Missouri in 1976.

Nickols was employed as an instructor in the Department of Sociology at Culver-Stockton College from 1967 to 1970 and directed the Family-to-Family Project for the Christian Church (Disciples of Christ), in Central Missouri, from 1971 to 1973. She joined the faculty of the Department of Housing, Design, and Consumer Resources at Oklahoma State University in 1976.

Nickols served as director of the OSU Family Study Center during 1979-83 and again in 1984-85. She was a Fulbright Lecturer at Chancellor College, the University of Malawi, while on sabbatical leave in 1983-84 and co-directed a research project on income-generation activities of rural women in that south African nation. Nickols also has presented visiting lectures and seminars in Korea, Japan, and Kenya.

A prolific scholar, Nickols has published and lectured extensively in the areas of family resource management, the relationship between wives' employment and family-member time allocation, and comparative time allocation in single- and two-parent households. She chaired the American Home Economics Association's family economics/home management section from 1983 to 1985 and currently serves as AHEA vice-president for internal relations.

Nickols received the Citation of Merit of the College of Home Economics, University of Missouri, in 1982, the Distinguished Service Award of the College of Home Economics, Kansas State University, in 1983, and the Lela O'Toole Research Award of the Oklahoma Home Economics Association in 1986. She is a member of several professional and honorary organizations in her field and has been recognized in *Who's Who in American Women*.

SHRFS Establishes Janice M. Smith Graduate Fellowship Fund

A new graduate fellowship fund has been established by the School of Human Resources and Family Studies to memorialize the distinguished professional career of **Janice M. Smith**, head of the UI Department of Home Economics from 1950 to 1971. The Janice M. Smith Graduate Fellowship Fund will be used to attract highly qualified students to graduate curricula in the School.

Professor Smith, who died in February, 1986, was a highly respected nutritionist and departmental administrator. During her long tenure as department head, new doctoral programs were implemented in Foods and Nutrition and Family and Consumption Economics. Bevier Hall, the center for home economics studies on the Urbana-Champaign campus, also was planned and constructed at that time.

As of the end of September, more than \$11,000 in gifts and pledges has been received from home economics alumni, family, and friends. It is hoped that resources available for the new graduate fellowships will grow as more alumni and friends become aware of the memorial fellowship fund.

Additional contributions to the Janice M. Smith Graduate Fellowship Fund may be forwarded to the **Director, School of Human Resources and Family Studies, 260 Bevier Hall, 905 South Goodwin Avenue, Urbana, Illinois 61801.**

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AgriView



College of Agriculture/University of Illinois at Urbana-Champaign

Summer, 1987

\$1 Million Funk Challenge Gift Boosts Ag Library Development

A \$1 million challenge gift from the family and descendants of Isaac and Cassandra Funk has provided the first step toward developing a new Illinois Agricultural Library and Information Science Center on the Urbana-Champaign campus.

Eugene D. Funk, Jr., representing the Funk family members, announced the major gift to the UI College of Agriculture at a Bloomington Rotary Club meeting on December 4, 1986. Commenting on the gift's importance to the proposed library development effort, Funk said, "I hope that the \$1 million seed planted by the Funk family at this time will grow into a significant knowledge center for agricultural information."

In accepting the challenge gift, College dean **John R. Campbell** presented a slide-sound show documenting the key role of the Funk family in developing Illinois agriculture over the past century and a half.

Campbell lauded the dynamic leadership and vision of the Funk family, as well as its long and rewarding ties with the UI College of Agriculture. "Since before the turn of the century, leaders of the College have recognized in the Funk family a fountainhead of active support and guidance and an inspirational model of intellectual curiosity."

Following receipt of the Funk challenge gift, the UI Foundation has undertaken a major feasibility study to determine whether certain of the College's primary development goals may be met through private funding efforts. Priority areas include investments in physical facilities, such as the proposed Agricultural Library and Information Science Center; and investments in human resources, including endowed funds for scholarships, fellowships, and professorships.

According to College resource development director **Lynette M. Fournes**, data for the feasibility study were collected by the UI Foundation prior to May 1, 1987 and then submitted to the University Development Committee for review and recommendations.

Confidential evaluations of the College's development goals and priorities were obtained from more than 100 prominent alumni and friends nationwide. **Bill A. Nugent**, executive director of the UI Foundation, expects recommendations based on these interviews to be available by late summer, 1987.



Eugene D. Funk, Jr. (left) presents a document to College dean John R. Campbell, ceding more than \$1 million from the family and descendants of Isaac and Cassandra Funk to the University of Illinois. The Funk challenge gift is intended to encourage private funding support for a new Illinois Agricultural Library and Information Science Center.

Among the College's top development priorities is obtaining funding support for the proposed Agricultural Library and Information Science Center. Estimated construction cost for this modern, multi-purpose facility is \$15 to \$20 million. The complex would contain three symmetrically arranged wings and would be the focal point of the planned south campus area. It would be sited in the area directly west of Turner Hall and adjacent to several current or planned College buildings.

In addition to serving as a repository for up to 300,000 volumes, the planned complex would house an agricultural strategic planning center, a computer applications laboratory, an agriculture and natural resources database, and an electronic publishing center. Also planned are classrooms and state-of-the-art facilities for agricultural communications and publications services.

Campbell stressed the long-range importance of the proposed development effort and library project in a rapidly changing global economy. "Knowledge indeed represents a powerful tool in today's increasing complex, technology-oriented agricultural enterprises. Expanding our capability to acquire, store, and quickly disseminate new scientific knowledge is critical to any strategy to revitalize Illinois and U.S. agriculture."

SRIB "Incubator" Advances Ag R&D Efforts

The recently completed Sponsored Research Incubator Building (SRIB) will provide a tremendous boost for the College's newly implemented incubator program, says **Donald A. Holt**, director of the Illinois Agricultural Experiment Station.

The College is currently expanding efforts to link its basic and early-stage developmental research more closely with private sector agricultural R&D, thus speeding business expansion and economic growth in Illinois. Long-term objectives of the new incubator program, Holt notes, are two-fold: "speeding the commercialization of promising agricultural products and technologies that originate in university-based or other publicly supported agricultural research programs; and realizing an earlier and greater return on public and private investment in agricultural R&D."

Research breakthroughs in such scientific areas as biotechnology and artificial intelligence have triggered the development of thousands of promising new products and processes having potential applications in agriculture. Prospective SRIB tenants include both fledgling and established entrepreneurial firms interested in working closely with UI agricultural scientists in research, development, and/or prototype production of such "high-tech" products and processes.

A few of the many R&D possibilities which have been proposed for the SRIB facility by entrepreneurial firms include a cornstarch-based, biodegradable plastic that can be used in a myriad of commercial plastic products; a turnkey operation for soybean processing equipment; computer software for coal and energy impact research and market analysis; artificial intelligence/expert systems software for various agricultural applications; and identification systems for detecting human and animal diseases and testing for genetically linked disorders.



One of ten spacious laboratories in the Sponsored Research Incubator Building stands ready for its new tenants. The SRIB facility will offer computer and telecommunications linkages with the rest of the UIUC campus.



Workers put the finishing touches on the new Sponsored Research Incubator Building, located in the UI South Farms area. The laboratory facility, which is now ready for occupancy, will house R&D work of various entrepreneurial firms with high-tech agricultural products, processes, and services.

Still other R&D possibilities advanced by prospective SRIB tenants include studies in the utilization of amino acids in livestock feeds; counseling services for livestock producers regarding animal poisoning or chemical contamination; prototype development of sophisticated agricultural sensors and monitoring equipment; and design and testing of electronic instrumentation to analyze and certify grain quality.

A thirteen-member Community Advisory Board has been named to formulate policy under which the campus-based incubator facility will operate. Included on the recently organized advisory board, which is chaired by Holt, are business and industry representatives, Illinois farmers, UI administrators, economic development agency staff, and others.

One major goal is to select those proposed entrepreneurial programs that are most likely to enhance the Illinois economy and can benefit from close interaction with UI faculty and the use of specialized research facilities available on the UIUC campus. Entrepreneurs selected for SRIB also will be offered a number of services designed to help in developing business plans, establishing accounting procedures, and seeking necessary venture capital, Holt says.

SRIB is expected to be self-supporting, based on lease arrangements with entrepreneurial firms utilizing space in its ten wet and dry laboratories. Entrepreneurs will work closely with UI agricultural researchers in developing and testing new products and processes. Portions of the adjacent UI South Farms will be available for field testing purposes.

Two persons have already been appointed to administrative positions with the new incubator facility, which was completed in early July.

Kenneth Harris, assistant to the director of the Illinois Agricultural Experiment Station, will serve as campus liaison and oversee the day-to-day operation and management of the facility. **Richard Hahn**, former vice-president of research for A.E. Staley & Co., will work part-time in the area of industry liaison and promotion.

Campbell's Comments

by John R. Campbell, Dean



Through its planned Illinois Center for Value-Added Agricultural Research, the College is preparing to launch new and expanded research initiatives to improve the economic competitiveness, marketability, and

utilization of Illinois agricultural products. In the months and years ahead, we expect to be working very closely with agribusinesses, private industry, government agencies, commodity groups, and agricultural producers in this ambitious endeavor, which indeed is critically important to the revitalization and sustainability of the Illinois economy.

Our value-added program, which will receive \$500,000 in recurring annual funding support from the State of Illinois, is both interdisciplinary and broad-ranging in nature. It will encompass *crop processing and utilization*, including short- and long-term research thrusts in the Departments of Agricultural Engineering and Food Science to explore new post-harvest technologies, improve processing efficiency, and more fully utilize such technological advances as biosensors, automated controls, and continuous operation bioprocessing systems. Our researchers also will seek new or expanded uses for Illinois agricultural commodities in human and animal nutrition, industrial chemicals, and the energy field.

Research funded through competitive grants will focus on *product differentiation and co-product utilization*, including genetic modification of major crop species for specific end-uses in foods, feeds, fuels, and chemical feedstocks and utilization of food processing co-products in new, higher-value products. Competitive research grants in the broad area

of *marketing* will permit UI agricultural economists and others to focus on such critical issues as international trade policy, marketing trends, and the economic impact of new value-added agricultural enterprises.

A \$1.4 million renovation of the first floor and basement level of the Agricultural Bioprocess Laboratory (formerly known as the Dairy Manufactures Building) will provide high-quality laboratory space for many of these important value-added programs. The modernized facility will house ongoing research in agricultural product and process development, including work by our food scientists, food and processing engineers, and INTSOY staff.

One-half of the \$500,000 in annual state funds will be allocated to faculty and staff positions in the Departments of Agricultural Engineering and Food Science, as well as for various other research expenses. The remaining \$250,000 is earmarked for competitive research grants available on a university-wide basis. The College will continue to seek additional funding support from both the public and private sectors to sustain this major value-added effort.

We received a total of thirty-one value-added research proposals for the 1987-88 fiscal year and are presently reviewing several of these for funding consideration. I am greatly impressed by the diversity and intrinsic merit of these initial proposals — once again demonstrating the obvious sensitivity of our faculty to the "value-added" concept and their recognition of the potential impact of value-added agricultural research on the Illinois economy.

As this ambitious program grows, I will attempt to keep the readership to *AgriView* abreast of new value-added research developments and program thrusts in the College. Certainly, the future economic benefits of these efforts can be substantial.



An aluminum-framed greenhouse range looms skyward as the new UI Plant Sciences Greenhouses/Headhouse complex moves toward completion. The environmentally-controlled greenhouse facility will be used by the Departments of Forestry, Horticulture, Plant Biology, and Plant Pathology.



Shown is a panoramic view of the greenhouse construction site adjacent to Turner Hall. The new Plant Sciences complex will contain approximately 60,000 net assignable square feet of high-quality greenhouse space, laboratories, and support facilities and will include a plant conservatory.

\$200,000 Trebellas Endowment Aids Photobiotechnology Research

John P. Trebellas, president of the Champaign-Urbana Pepsi-Cola Bottling Company and noted community philanthropist, has recently established a \$200,000 endowment to support the ongoing research programs of **Constantin A. Rebeiz**, professor of plant physiology.

A plaque recently placed in Rebeiz' laboratory states the broad humanitarian and scientific purposes of the gift: "Research in this laboratory is supported in part by the John P. Trebellas Photobiotechnology Research Endowment to enhance the advancement of human knowledge and to better the human condition through basic and agricultural photobiotechnological research."

Rebeiz, who is internationally recognized for his recent research advances with photodynamic herbicides and insecticides, plans to continue his efforts to enhance the photosynthetic efficiency and productivity of economic plants.

He envisions increasing the yields of major grain crops such as corn, wheat, and soybeans two- to three-fold within the foreseeable future, providing both energy self-sufficiency and an adequate food supply for a burgeoning world population.

Rebeiz' laboratory also has been extensively involved in the development of bioengineered photosynthetic membranes and membrane cell reactors. He hopes to perfect a highly efficient membrane reactor that may be used in commercially producing the important industrial chemical, glycerol.

In acknowledging the Trebellas endowment, Rebeiz noted that it represents a major first step in efforts to establish a Center for Photobiotechnological Research at the University of Illinois. Income from the fund will initially be used to support the research activities of doctoral students working in Rebeiz' laboratory.



John P. Trebellas (left), who has established a \$200,000 endowment to support the photobiotechnology research of Constantin A. Rebeiz (center), tours Rebeiz' research laboratory with College dean John R. Campbell.

The JBT Graduate Fellowship Program: Meeting the Ag Mindpower Drain



Developing new scientific talent and mindpower for tomorrow's agriculture remains a top priority for

our nation's land-grant agricultural institutions, particularly in light of the growing human resources drain in the agricultural and human sciences. A 1986 USDA study projects a nationwide shortfall of more than 4,000 trained agriculturalists annually during the coming decade, including many requiring advanced degrees in the plant and animal sciences, engineering, ecology and natural resources, agribusiness management, agricultural finance, marketing, food science, nutrition, human services, and various health-related areas.

The nationwide human resources shortfall is expected to be particularly acute for persons engaged in basic and applied agricultural research, product and process development, marketing, finance, and other key technical and professional fields. A recent USDA/National Academy of Sciences conference, "Brainpower for Agriculture," identified the emerging fields of agricultural biotechnology, systems analysis, and international marketing as areas of obvious need.

As the College moves forward with new R&D initiatives for Illinois agriculture — "value-added" research with major agricultural commodities, sponsored research with new agricultural products and technologies, and expanded linkages with agribusiness firms and entrepreneurial groups — it also is developing the new scientific expertise and brainpower needed to sustain the agricultural and food system well into the 21st century. The College's Jonathan Baldwin Turner (JBT) Graduate Fellowship Program, established in 1986, is designed to support the professional development of top graduate scholars in a multitude of agricultural and agriculture-related disciplines.

The new fellowship program will provide comprehensive professional training and financial support for eight newly named doctoral fellows during the 1987-88 academic year. These talented young agricultural scientists will join three JBT Graduate Fellows already pursuing advanced studies in the College. Those entering the program must have previously completed a master's degree in an appropriate academic discipline, be a U.S. citizen, and meet additional academic requirements.

Each fellow receives an unrestricted stipend of \$10,000 per academic year. The fellowship award is subject to renewal for two additional years, provided that outstanding progress has been made toward the doctoral degree. The basic fellowship stipend may be augmented by the respective academic departments or program divisions, contingent upon internal policy and the availability of fellowship funds. Fellowship recipients are formally designated JBT Graduate Fellows and receive additional honors and recognitions from the College.

The JBT Graduate Fellowship Program is privately funded through endowments and gifts from various individuals and organizations. Fellowship applications are accepted on a competitive basis through the ten academic units in the College currently offering doctoral degree programs, and recipients are selected by a JBT fellowship review committee.

Participating academic units include the Departments of Agricultural Economics, Agricultural Engineering, Agronomy, Animal Sciences, Food Science, Horticulture, and Plant Pathology, as well as the Divisions of Family and Consumer Economics, Foods and Nutrition, and Nutritional Sciences. Prospective doctoral students in the College's Division of Human Development and Family Ecology also will be eligible for consideration in the upcoming (1988) academic year.

Associate dean **William L. George**, coordinator of the new fellowship program, noted that the eight 1987-88 JBT Graduate Fellows represent some of the nation's premier scientific talent. "We are fortunate to have attracted several individuals with exceptional intellectual capabilities, professional motivation, and a keen interest in the agricultural and human sciences. These are precisely the qualities needed to advance research and scientific innovation in a period of great societal change."

George also stressed the importance of sustaining and enlarging the new JBT fellowship program, based on recent national trends in agricultural education. "A major issue confronting the agricultural sector and American society as a whole is maintaining both the *quality* and *numbers* of students entering the agricultural professions."

The 1987 JBT Graduate Fellows represent widely diverse academic backgrounds and scientific interests, including such "high-tech" specializations as maize genetics, nutritional immunology, host-plant pathogen interactions, ruminant nutrition, and expert systems in engineering design. The eight have completed undergraduate or graduate degrees at several major educational institutions located throughout the nation.

Michael J. Cecava, a native of York, Nebraska, completed his bachelor of science degree in animal science at the University of Nebraska-Lincoln in 1985. He was the recipient of a four-year Ak-Sar-Ben Scholarship and was recognized by the American Society of Animal Science (ASAS) as an outstanding undergraduate student. Cecava also was honored with the Nebraska Sheep Council's first Undergraduate Research Award for his research study on the effects of rumen microbial inoculant on nitrogen balance in early-weaned lambs.

Cecava earned his master's degree in animal science at the University of Illinois in 1987, specializing in ruminant nutrition. He has investigated the effects of dietary energy level and source of protein on post-ruminal amino acid supply in growing beef cattle and will present his findings at the national ASAS meeting this year. Cecava plans to pursue doctoral studies in ruminant nutrition under the direction of associate professor **Neal R. Merchen**, Department of Animal Sciences.

Kevin C. DeHaan is a native of Richmond, Illinois. He earned his bachelor of science degree with high honors at the University of Illinois in 1985, majoring in animal sciences. A Jonathan Baldwin Turner Scholar, DeHaan received three additional undergraduate scholarships and was a finalist for the Wilbur H. Coultas "Outstanding Senior" Award. He also competed on the UI meats and livestock judging teams, winning numerous honors and awards.

A University Fellow, DeHaan completed his master's degree in animal sciences at the University of Illinois in 1987. His graduate research has dealt with the effects of prenatal androgenization on lamb performance, estrus behavior, and carcass composition. DeHaan has authored two research abstracts for presentation at ASAS meetings and was the UI representative in the 1987 graduate research paper competition of the Midwest Section, ASAS. He plans to pursue doctoral research on endocrine regulation of animal growth and development under the direction of professor **Larry L. Berger**, Department of Animal Sciences.

Keith A. Garleb, a native of Valmeyer, Illinois, earned his bachelor of science degree in animal sciences at the University of Illinois in 1985. A Jonathan Baldwin Turner Scholar, he also won both the ASAS Scholarship Award and the Undergraduate Research/Scholarship Award. Garleb graduated with highest honors and received Bronze Tablet recognition.

A Hackett Fellowship winner, Garleb earned his master's degree in animal sciences at the University of Illinois in 1987. His graduate research has dealt with the isolation and identification of lignin-carbohydrate complexes with five by-product feedstuffs and their effect on fiber digestibility. He has presented abstracts on fiber digestibility and the use of washed rumen microorganisms to isolate lignin-carbohydrate complexes at national ASAS meetings and has co-authored additional publications. Garleb will pursue doctoral studies in the Division of Nutritional Sciences, investigating the metabolic effects of specific fiber components under the direction of professor **George C. Fahey, Jr.**, Department of Animal Sciences.

Nora A. Hallquist, a resident of Mt. Prospect, Illinois, attended the University of Arizona for one year and completed her bachelor of science degree in foods and nutrition at the University of Illinois in 1985. She was a recipient of the Illinois State Scholarship.

Hallquist earned her master's degree in foods and nutrition at the University of Illinois in 1987, receiving both the Hackett and Wardall Fellowships. She has investigated the effects of iron deficiency and iron overload on non-specific and cell-mediated immunity and has shown impaired natural killer cell activity or cytotoxicity in iron-deficient animals. A portion of her research findings were reported at the FASEB meeting in April, 1987. In her doctoral research, Hallquist plans to explore mechanistic and biochemical processes responsible for defects in chemotaxis and cytotoxicity, including defects in transferrin receptors or iron-dependent enzymes in immunologic cells of iron deficient animals. She will work under the direction of associate professor **Adria R. Sherman**, Division of Foods and Nutrition.

Robyne R. Lau is a resident of Richmond, Virginia. She completed her bachelor of science degree, *magna cum laude*, in biology at Virginia Commonwealth University in 1985 and did additional work at the University of Virginia. Lau was designated the "Outstanding Undergraduate Biology Student" at VCU and was named to the National Dean's List.

Lau completed her master's degree in biology, also at VCU, in 1987. Her graduate preparation has included work in plant physiological ecology, population biology, community ecology, and adaptation ecology. She has conducted a graduate research project on the effects of physiological integration on the survivorship and water relations of *lycopodium complanatum*, a clonal understory herb, and will present her findings at the national meeting of the Ecology Society of America in August, 1987. Lau plans to pursue doctoral studies on the effects of different plant species mosaics on the invasion and establishment of plant pathogens, working under the direction of assistant professor **Henry T. Wilkinson**, Department of Plant Pathology.

Charles R. Stark, a native of Cecilia, Kentucky, completed his undergraduate studies in agricultural education at the University of Kentucky in 1974. He was named the "Outstanding Senior" in his UK College of Agriculture graduating class and was awarded the bachelor of science degree with high distinction. Stark subsequently taught at the secondary level for two years and has operated a family farm since 1976.

Stark earned his master of science degree in education at the University of Kentucky in 1982, receiving a graduate fellowship from the UK College of Education. He has since completed additional graduate studies in macroeconomic and microeconomic theory and plans to pursue doctoral work in the Department of Agricultural Economics. Stark's areas of special interest include agricultural finance, farm management, and production economics.

Kenneth A. Tarbell is a native of Hampton, Virginia and currently resides in Plano, Texas. He completed his bachelor of science degree in agricultural engineering, *magna cum laude*, at Virginia Polytechnic Institute and State University in 1982. Tarbell received an Agricultural Engineering Scholarship at VPI and also served as an undergraduate and graduate research assistant there.

Tarbell earned his master's degree in agricultural engineering at VPI in 1983, specializing in the application of reliability and statistical methods in structural design of wood components. He has since been employed as a design engineer and general manager with an engineering firm in Dallas, Texas. Tarbell has authored four refereed technical articles, a computer program used in beam analysis, and a comprehensive manual on loading calculations, static analysis, and design optimization techniques with wood trusses. He plans to pursue doctoral work in probabilistic modeling and expert systems development in the Department of Agricultural Engineering.

Brent E. Zehr is a native of Urbana, Illinois. He completed his undergraduate degree in agronomy/agri-

cultural science at the University of Illinois in 1984, earning Dean's List recognition and graduating with highest honors. Zehr also was employed part-time as an undergraduate research assistant, investigating the quantitative aspects of maize genetics.

A Wright Fellowship winner, Zehr earned his master's degree in agronomy at the University of Illinois in 1986. He has conducted graduate research in the area of maize tissue culture and cellular biology, exploring somoclonal variation in the progeny of plants regenerated from callus cultures of several in-bred maize lines. Zehr also has authored or co-authored several papers on his research findings. He plans to pursue doctoral studies combining quantitative and molecular genetics in a traditional corn breeding program, working under the direction of professor **John W. Dudley**, Department of Agronomy.

W. Reginald Gomes, chairperson of the JBT Graduate Fellowship Committee and one of the original developers of the program, noted that it has already made excellent progress in achieving its fundamental objective — that of attracting some of the nation's premier scientific talent to UI doctoral programs in the agricultural and human sciences.

"During its brief two-year history, the JBT Graduate Program has achieved a clear-cut identity as an effective recruitment and professional enhancement tool," Gomes said. "It is rapidly being institutionalized alongside the earlier JBT merit scholarship and undergraduate research programs; and we expect it to enjoy increasing levels of national prominence and acceptance in the years ahead."

Reaching Across America: College Telemarketing Effort A Success

"Reaching Across America" was the pervasive theme of the College's recent telemarketing effort, which "reached" literally thousands of UI agricultural and home economics alumni living coast-to-coast. Under the coordination of UI Foundation staff, enthusiastic student callers updated far-flung alumni about important programs, priorities, and enrichment needs in the College.

The nationwide telemarketing outreach yielded a bountiful harvest of alumni interest and financial support — some \$132,672 in new pledges from agricultural alumni and \$26,465 from home economics grads. The total pledge amount was more than \$159,000 — an increase of approximately 40 percent over last year's telemarketing total. Pledges included both unrestricted gifts to the College and targeted support for scholarships, library resources, student enrichment programs, and other specific needs of individual departments.

The successful 1987 telemarketing campaign, which was completed during the months of March and April, was preceded by an introductory letter from College alumnus **John G. Huftalin**, '60.



Student callers in the 1987 "Reach Across America" call-a-thon are briefed by College dean John R. Campbell on the importance of their nationwide telemarketing effort. This year's student callers were (from left to right): Caron Grey, Penny Hartel, Mary Tjarks, and Bruce Truman (on phone). UI Foundation staff member Peter Garceau (front, seated) coordinated the successful project.

Faculty Research Grants

The following research grants have been awarded to faculty members of the College of Agriculture for start-up dates from August 15, 1986 through June 1, 1987. Parenthesized information indicates the awarding organization or agency, the total dollar amount of the research grant, and its duration.

Philip J. Dziuk, Department of Animal Sciences, "Growth Pattern of the Pig Uterus" (U. S. Department of Agriculture, \$44,000, 8/15/86 to 8/31/88).

Patricia V. Johnston, Department of Food Science, "Examination of the Dietary Need for N-3 Fatty Acids Using a Transplantable Tumor Model" (U. S. Department of Agriculture, \$114,632, 9/1/86 to 8/31/88).

Fred A. Kummerow, Department of Food Science, "Dietary Characteristics That Influence Human Atherosclerosis" (Illinois Beef Council, \$15,000, 9/1/86 to 8/31/87).

Janice M. Bahr, Department of Animal Sciences, "Endocrine Changes Associated With Molting in the Domestic Hen" (U. S. Department of Agriculture, \$192,000, 9/1/86 to 8/31/88).

William E. Artz and E.G. Schanus, Department of Food Science, "Inhibition of Warmed-Over Flavor in Beef Products" (Illinois Beef Council, \$18,550, 9/1/86 to 8/31/87).

Marcos M. Kogan, Daniel C. Fischer, Jack D. Paxton and Lester Y. Wei, Office of Agricultural Entomology, "Effects of Soybean Phytoalexins on Herbivorous Insects" (U. S. Department of Agriculture, \$95,000, 9/1/86 to 8/31/89).

Fred E. Below, Department of Agronomy, "Determination of the Physiological Responses Associated with Near Doubling of Wheat Yields Obtained with Mixtures of Ammonium and Nitrate Versus Nitrate in Hydroponic Culture and the Lack of Similar Response

in Soil" (Tennessee Valley Authority, \$36,000, 9/1/86 to 8/31/89).

Paul D. Shaw, Department of Plant Pathology, "Characterization of Virulence Genes from *Pseudomonas Syringae* PV. Tabaci" (U. S. Department of Agriculture, \$80,000, 9/15/86 to 9/30/88).

Walter L. Hurley, Department of Animal Sciences, "The Bovine Mammary Immunoglobulin G Receptor" (U. S. Department of Agriculture, \$100,000, 9/15/86 to 9/30/88).

Bruce L. Vasilas and Randall L. Nelson, Department of Agronomy, "N₂ Fixation and N Supply Effects on Soybean Seed Fill Duration and Yield" (U. S. Department of Agriculture, \$70,000, 9/15/86 to 9/30/88).

Jeffrey O. Dawson and Mark B. David, Department of Forestry, "Factors Regulating Black Walnut Growth in Mixed Plantings With N Fixers" (U. S. Department of Agriculture, \$91,000, 9/15/86 to 9/30/89).

Theodore T. Hymowitz, Department of Agronomy, "Evaluation of Wild Perennial Glycine Accessions for Resistance to *Phakopsora Pachyrhizi* Syd." (U. S. Department of Agriculture/AID, \$50,000, 9/15/86 to 9/30/89).

Robert A. Easter, Department of Animal Sciences, "Effects of Enzyme Pre-Treatment of Soybean Meal on Pre-Ileal Disappearance of Nitrogen and Dry Matter in Young Pigs" (NOVO Laboratories, Inc., \$4,550, 9/15/86 to 9/14/87).

Gary L. Rolfe, Department of Forestry, "Little Calumet River Watershed Project PL 566" (U. S. Department of Agriculture/Forest Service, \$26,000, 9/30/86 to 8/31/87).

Lowell D. Hill, Marvin R. Paulsen, Gene C. Shove, Marvin P. Steinberg, Richard A. Weinzierl, and Barry J. Jacobsen, Department of Agricultural Economics, "Costs and Benefits of Changing the Foreign Material in Corn and Soybeans in the Market Channel from Farm to Foreign Destination (Anderson Research Fund/OARDC, \$10,000, 10/1/86 to 9/30/88).

Jimmy H. Clark, Department of Animal Sciences, "Efficacy of Recombinant Bovine Somatotropin (BST) in Lactating Dairy Cows at 3 Dosage Levels" (American Cyanamid Company, \$128,250, 10/1/86 to 10/1/89).

C. Robert Taylor, Department of Agricultural Economics, "Consortium for Research on Crop Production Systems" (U. S. Department of Agriculture/ERS, \$43,000, 10/1/86 to 9/30/89).

Mark B. David, Department of Forestry, "Response of Organic and Inorganic Sulfur Constituents to Watershed Manipulations" (Research Fund of State Univ. of New York, \$33,561, 10/1/86 to 9/30/89).

Mark B. David, Frank J. Stevenson, Sandra L. Brown and George F. Vance, Department of Forestry, "Role of Organic Acids in Affecting Soil Solution and Surface Water Acidification in Response to Watershed Manipulations" (Environmental Protection Agency, \$105,000, 10/1/86 to 9/30/87).

Lawrence E. Schrader, Department of Agronomy, "Environmental Effects on Water Flow Through the Soil-Plant-Air Continuum" (U. S. Department of Agriculture/ARS, \$61,000, 10/1/86 to 4/30/88).

Anton D. Pugel, Department of Forestry, "Composites from Southern Pine Juvenile Wood" (U. S. Department of Agriculture/Forest Service, \$19,980, 10/28/86 to 12/31/87).

Carroll E. Goering and **Lester D. Savage**, Department of Agricultural Engineering, "Evaluation of an Ethanol-Fumigated Diesel Tractor" (Illinois Department of Energy and Natural Resources, \$65,217, 11/15/86 to 11/14/88).

James B. Sinclair, Department of Plant Pathology, "Impact of Various Seedborne Fungi & Virus on Soybean Seed Quality, Including Symptoms of Infection Effect on Grain Quality Standards, Seed Viability, and Value-Added Production" (Illinois Soybean Program Operating Board, \$60,000, 12/1/86 to 11/30/89).

Donald K. Layman, Division of Foods and Nutrition, "Dietary Fat, Exercise and Cancer" (American Cancer Society, \$13,786, 12/21/86 to 12/20/87).

Floyd K. McKeith, **Peter J. Bechtel**, **Jan E. Novakofski** and **Tom R. Carr**, Department of Animal Sciences, "Proximate Composition of the Major Beef Carcass Muscles" (National Livestock and Meat Board, \$14,400, 1/1/87 to 12/31/87).

James B. Sinclair, Department of Plant Pathology, "The Role of Microorganisms Associated with Soybean Grain in Reducing Grades and Value-Added Products" (American Soybean Association, \$60,000, 1/1/87 to 12/31/89).

Kathryn S. Keim, **Robert W. Kirby**, and **Richard P. Carano**, Division of Foods and Nutrition, "The Effect of Phytate on Glycemic and Insulin Response of Persons with Type II Diabetes Mellitus" (Carle Foundation, \$3,075, 1/1/87 to 12/31/87).

Carroll E. Goering and **Lester D. Savage**, Department of Agricultural Engineering, "Evaluation of an Ethanol-Fumigated Diesel Tractor" (Illinois Corn Marketing Board, \$24,896, 1/1/87 to 12/31/88).

Sandra L. Brown, Department of Forestry, "Tree Growth Rates and Regeneration of Buttonland Swamp Forest of Southern Illinois" (Illinois Department of Conservation, \$10,272, 1/15/87 to 12/15/87).

Jan E. Novakofski, Department of Animal Sciences, "Evaluation of a Surimi-Like Raw Material Made From Pork" (Illinois Pork Producers Association, \$11,739, 4/1/87 to 3/31/88).

Hans P. Blaschek, Department of Food Science, "Genetic Amplification of Alpha-Amylase in Clostridium Acetobutylicum SA-1 for Improved Conversion of Corn Starch to Butanol" (Illinois Corn Marketing Board, \$61,820, 4/1/87 to 3/31/89).

Richard A. Weinzierl, Office of Agricultural Entomology, "A Two-Year Evaluation of Protectant Insecticides for Stored Corn: Residue Levels, Efficacy and Benefits to Grain Grade and Economic Value" (North Central Region Pesticide Impact Assessment Program, \$13,839, 4/1/87 to 3/31/88).

Loren E. Bode and **Donald G. White**, Department of Agricultural Engineering, "Development of a System to Uniformly Apply Fungicidal Grain Protectants to Corn" (Illinois Corn Marketing Board, \$23,540, 4/1/87 to 3/31/89).

Floyd K. McKeith, **Peter J. Bechtel**, **Jan E. Novakofski**, **Tom R. Carr** and **Karl A. Bruggen**, Department of Animal Sciences, "Low Fat-Low Salt Processed Beef Products" (Illinois Beef Council, \$10,089, 5/1/87 to 4/30/88).

Floyd K. McKeith, **Peter J. Bechtel**, **Jan E. Novakofski**, **Tom R. Carr** and **Karl A. Bruggen**, Department of Animal Sciences, "Value Enhancement of Low and Intermediate Value Meat Cuts Using Precooking and Enzymatic Tenderization" (Illinois Beef Council, \$8,934, 5/1/87 to 4/30/88).

Jan E. Novakofski, **Floyd K. McKeith**, **Tom R. Carr** and **Peter J. Bechtel**, Department of Animal Sciences, "Beef Surimi: Process Development and Product Characterization" (Illinois Beef Council, \$8,923, 5/1/87 to 4/30/88).

Floyd K. McKeith, **Karl A. Bruggen**, **Jan E. Novakofski**, **Peter J. Bechtel** and **Tom R. Carr**, Department of Animal Sciences, "Processing & Sensory Properties of Beef Bacon" (Illinois Beef Council, \$11,024, 5/1/87 to 4/30/88).

Peter J. Bechtel, **Tom R. Carr**, **Floyd K. McKeith** and **Jan E. Novakofski**, Department of Animal Sciences, "Development of Nonrefrigerated Shelf Stable Meat Entrees" (Illinois Beef Council, \$2,213, 5/1/87 to 4/30/88).

J. Kent Mitchell, **Allan S. Felsot** and **John W. Hummel**, Department of Agricultural Engineering, "Non-point Pollution Mitigation Evaluation of Modern Tillage Systems" (U. S. Department of Interior/Water Resources Research, \$19,000, 5/31/87 to 5/1/88).

Constantin A. Rebeiz, Department of Horticulture, "Relationship of the Chlorophyll Biosynthetic Heterogeneity to the Development of the Chemical-Structure Heterogeneity Photosynthetic Membranes" (National Science Foundation, \$72,000, 6/1/87 to 12/31/88).

Peter J. Bechtel, Department of Animal Sciences, "Increasing Consumer Demand for Pork with New Extruded Pork Products" (Illinois Pork Producers Association and National Pork Producers Council, \$15,808, 6/1/87 to 5/31/88).

David L. Chicoine, Department of Agricultural Economics, "Improving Local Road Management in Rural Governments" (Department of Transportation-Federal Highway Administration/National Highway Institute, \$35,000, 6/1/87 to 1/31/88).

Harris A. Lewin, **Philip D. George** and **Rohan L. Fernando**, Department of Animal Sciences, "Detection of Major Genes for Growth Using Genetic Markers" (U. S. Department of Agriculture, \$125,000, 6/1/87 to 5/31/90).

J. Bruce Litchfield, **Marvin R. Paulsen** and **James B. Sinclair**, Department of Agricultural Engineering, "Physical and Optical Properties of Soybean Seeds Damaged by Various Seedborne Fungi and A Virus" (Illinois Soybean Program Operating Board, \$89,875, 6/1/87 to 5/31/90).

Ivan J. Jansen, Department of Agronomy, "Prime Farmland Reclamation After Surface Mining" (U. S. Department of Agriculture, \$189,600, 6/1/87 to 5/31/89).

Faculty Awards and Honors

David H. Baker, professor of nonruminant nutrition, was formally honored June 10 with the U.S. Department of Agriculture Distinguished Service Award for outstanding professional achievements in the category of scientific research. Baker was cited "for outstanding research contributions in the areas of amino acid metabolism and trace mineral interrelationships, leading to improved efficiency in poultry and swine production."

The award, USDA's highest professional honor, was presented at the federal agency's 1987 Honor Awards Day Ceremony in Washington, D.C.

Donald P. Briskin, assistant professor of plant physiology, was one of three scholars recently selected as Beckman Fellows in the Campus Center for Advanced Study for 1987-88. The fellowships are named for UIUC benefactor Arnold O. Beckman and recognize outstanding younger faculty who have already made "distinctive scholarly contributions" in their fields.

Charles M. Brown, professor of small-grain breeding; **Munir Cheryan**, professor of food engineering; and **Sidney L. Spahr**, professor of dairy management, were formally honored March 10 with the 1987 Paul A. Funk Recognition Award. The prestigious award is annually presented by the College and the Funk Foundation of Bloomington, Illinois for outstanding professional achievements and major contributions to the betterment of agriculture through extension, teaching, research, and public service.

Each Funk award winner received a certificate of recognition, an unrestricted personal award of \$2,000, and a \$1,000 recurring annual salary increment. The sum of \$1,000 also was presented to the respective academic departments of the three award winners to support their programs and professional activities.

Marvin P. Bryant, professor of dairy science and microbiology in the Department of Animal Sciences, was elected a member of the prestigious National Academy of Sciences on April 27. He is internationally recognized for his many pioneering research contributions in anaerobic microbiology, rumen microbiology, and anaerobic ecosystems.

A member of the UI animal sciences faculty since 1966, Bryant is a Fellow of both the American Academy for Microbiology and the American Association for the Advancement of Science. He previously was honored with several other major awards, including the Paul A. Funk Recognition Award of the UI College of Agriculture, the American Dairy Science Association's Borden Award, and the Fisher Scientific Company Award for Applied and Environmental Microbiology. Bryant is only the 28th UI faculty member to be elected to the National Academy of Sciences.



Three distinguished College of Agriculture faculty members were formally honored with the Paul A. Funk Recognition Award for 1987. Shown are new recipients (left to right) Munir Cheryan, Sidney L. Spahr, and Charles M. Brown.

John R. Campbell, dean of the College and professor of animal sciences, was recently honored with the 1987 American Dairy Science Association Award of Honor. The award, which recognizes Campbell's distinguished service and outstanding contributions to the ADSA, was presented June 20, 1987 at the 82nd annual meeting of the association in Columbia, Missouri.

Campbell has been active in the ADSA since 1955, and served as the association's president in 1980-81.

Campbell also was recognized by The Chicago Farmers on June 26 with its Distinguished Service to Agriculture Award. He was cited at the organization's annual dinner in Rosemont for significant contributions to agriculture during his tenure at the University of Illinois.

In February, Campbell received the 1986 "Agri-Business Leader of the Year" Award of the St. Louis Agri-Business Club for "dynamic leadership to Illinois and Missouri agriculture." The award was the first made by the club to an individual from outside the St. Louis metropolitan area.

Leslie L. Christianson, associate professor of structures and environment, was recently honored with the 1987 Teaching Excellence Award of the UI Department of Agricultural Engineering. The award, which is based on a student selection process, was presented April 26 at the department's annual awards banquet in Champaign. In addition to his teaching and research activities, Christianson also recently co-authored a book entitled *Design in Agricultural Engineering*.

Receiving 1987 graduate teaching awards in the department were **William Cassady** and **Edwin Martin**.

Faculty Awards and Honors

A team of six UI Cooperative Extension Service staff members recently received the 1987 U.S. Department of Agriculture Distinguished Service Award for their outstanding efforts in "marshalling volunteers and creating networks of public and private agencies to help farm families survive the change in today's agricultural economy."

Honored for their work in developing and implementing the Facing Agricultural Crises Together (FACT) program were **Delbert T. Dahl**, Urbana, Extension marketing specialist; **Peg Hoffman**, Dixon, director of Extension Region 1; **Donna Mann**, Oregon, Ogle County Extension home economics adviser; **James Morrison**, Amboy, Lee County Extension agricultural adviser; **Evelyn Prasse**, Freeport, Carroll County Extension home economics adviser; and **David Whitson**, DeKalb, DeKalb County Extension agriculture adviser. The award, USDA's highest professional honor, was presented at the 1987 Honor Awards Day Ceremony in Washington, D.C. on June 10.

The FACT program, which was developed "to bring a local focus to the human problems related to the farm economic situation," provides educational and informational assistance for communities and community leaders in northwestern Illinois. FACT has involved more than 130 volunteers who serve on nine steering committees. Additionally, some 117 peer listeners have been trained to provide emotional and psychological assistance to farm families on a one-to-one basis, and 27 support groups have been organized.

A quarterly FACT newsletter focuses on such subjects as current agricultural legislation, programs and events relevant to farm families' needs, the availability of local and state resources, and research studies to aid family counselors and peer listeners. FACT organizers also have developed a resource packet of materials relating to economic, emotional, and educational issues for use by prospective counselors. About 150 support professionals received the resource packet and other training from county-based Extension staff.

Three faculty members of the Department of Animal Sciences were formally honored for outstanding achievement and professional excellence at the department's annual awards banquet, held April 24 in Champaign. **Robert A. Easter**, professor of swine nutrition, received the 1987 H.H. Mitchell Award for Excellence in Graduate Teaching and Research; **J. Robert Lodge**, professor of physiology, was recognized with the 1987 D.E. Becker Award for Excellence in Undergraduate Teaching and Counseling; and **Carl M. Parsons**, associate professor of poultry nutrition, won the 1987 G.R. Carlisle Award for Excellence in Extension Teaching. Graduate student **Lee Krumholtz** also was honored with the 1987 A.L. Neumann Outstanding Graduate Student Award.

Daniel Gianola, professor of animal breeding and genetics, has received the 1987 "Outstanding Young Researcher" Award, given by the Midwestern Section of the American Society of Animal Sciences. The research award was presented at the society's regional meeting, held March 23-25 in Des Moines, Iowa.

Six College faculty members were recognized March 10 with the College of Agriculture Faculty Award for Excellence. A Senior Faculty Award and a Young Faculty Award were presented for "outstanding professional achievement and demonstrated excellence" in each of the three categories of extension, research, and teaching.

The 1987 award recipients included **Harold D. Guither**, Extension agricultural economist and professor of agricultural policy (Senior Faculty Award in Extension); **David L. Chicoine**, Extension agricultural economist and professor of public finance and taxation policy (Young Faculty Award in Extension); **Janice M. Bahr**, professor of animal reproductive physiology (Senior Faculty Award in Research); **George C. Fahey, Jr.**, professor of nutritional biochemistry (Young Faculty Award in Research); **Donald G. White**, associate professor of plant pathology (Senior Faculty Award in Teaching); and **Robert A. Easter**, professor of swine nutrition (Young Faculty Award in Teaching).

Each of the six received a certificate of recognition and a \$1,000 recurring annual salary increment. The awards were formally presented by College dean **John R. Campbell** at the 1987 College of Agriculture Awards Program.



The College's six Faculty Award for Excellence recipients for 1987 are shown at the annual awards program in the Illini Union. Standing (left to right) are George C. Fahey, Jr., David L. Chicoine, Robert A. Easter, and Donald G. White. Seated are Harold D. Guither and Janice M. Bahr.

Faculty Awards and Honors

Donald A. Holt, director of the Illinois Agricultural Experiment Station and professor of agronomy, has received the 1987 Distinguished Alumnus Award of the Illinois Community College Trustees Association. The statewide award is given annually to an Illinois community college graduate whose personal and professional accomplishments exemplify the value of a community college education.

Holt, who is a graduate of Joliet Junior College, was one of fifteen finalists for the statewide honor. The award was presented on June 12 at the association's 15th annual convention.

Holt presently chairs the review panel for the U.S. Environmental Protection Agency's National Crop Loss Assessment Network. A Fellow of both the American Society of Agronomy and the Crop Science Society of America, he recently was named president-elect of the ASA. Holt also is a past president of Gamma Sigma Delta, the international honor society of agriculture.

The trustees' association, which is composed of trustees from all 39 public community college districts in Illinois, was created in 1970 to represent the statewide community college system.

Michael A. Hudson, assistant professor of livestock marketing; and **Mary A.L. Smith**, assistant professor of plant physiology, have been named Lilly Endowment Teaching Fellows for 1987-88. The Lilly fellowship grants support selected UI faculty who are in their second to fifth year of teaching, enabling them to devote additional time to instructional development and/or research on teaching.

Each Lilly Fellow receives released time from their academic responsibilities and up to \$650 for supplies and equipment to support their teaching research projects. In addition, the respective academic departments of each fellowship recipient are awarded \$6,000.

Fellows are chosen on the basis of excellence in teaching and scholarship, plans to design or redesign an interdisciplinary undergraduate course, and commitment to the teacher/scholar role model.

Lilly Fellows participate in monthly on-campus seminars held in conjunction with the program and also attend twice-yearly Lilly Endowment conferences together with fellows from five other participating institutions. The nationwide program is now in its 14th year of existence.

Michael A. Hudson, assistant professor of livestock marketing, was recently honored with both the Agricultural Economics Club/NAMA "Outstanding Instructor" Award in agricultural economics and the Alpha Zeta "Outstanding Instructor in the College of Agriculture" Award for 1987. The two awards for teaching excellence were presented at the 1987 All-Ag Banquet, held May 1 in the Illini Union Building.

Several Extension youth advisers have recently been honored by the Illinois Association of Extension Advisers-Youth (IAEA-Y) for outstanding professional achievement and public service. Receiving the 1987 IAEA-Y Distinguished Service Award were **Pamela Jacobs**, Monroe County; and **Melinda States**, Wayne County. Winner of the IAEA-Y Achievement In-Service Award was **Margaret Severinson-Godke**, Warren County.

Recipients of IAEA-Y communications awards in various categories were: **Pamela Jacobs**, Monroe County (direct mail piece and news story); **Steven Wagoner**, Logan County (feature story, radio program); **Kathy Halstead**, McHenry County (personal column); and **David McMurtry**, DuPage County (newsletter). The 1987 IAEA-Y award winner in the slide-set category was the 4-H Memorial Camp publicity committee, composed of **Denise Kistner**, Christian County; **Mary Jo Stewart**, Macon County; and **Steven Wagoner**, Logan County.

Donald G. Jedele, professor of farm structures extension, was recently inducted into the Rural Builders Hall of Fame, established by *Rural Builder* magazine. The award was presented February 5 at the National Rural Builder Show in Nashville by **Frank Lessiter**, editor and publisher of *Rural Builder*.

Jedele's design work with various types of farm and rural structures is credited with being particularly important to the growth of the rural building industry. The award citation noted that, "Many rural builders are convinced that he has contributed more to practical design and engineering of farm buildings than any other educator."

C. James Kaiser, associate professor of forage production at Dixon Springs Agricultural Center, was recently honored with the 1987 Shawnee RC&D Area Council Certificate of Appreciation.

Richard P. Kesler, professor of farm management extension and assistant head of the UI Department of Agricultural Economics, was installed as president of the Illinois Society of Professional Farm Managers and Rural Appraisers at the society's 1987 annual meeting in February.

Darrell A. Miller, professor of plant breeding and genetics, is a recipient of the 1987 Tressler-AVI Teaching Award, given by the National Association of Colleges and Teachers of Agriculture. The award was presented at the NACTA annual meeting, held June 14-17 in Columbia, Missouri.

Miller earlier was honored with the 1987 "Outstanding Agronomy Teacher" Award, presented at the Field and Furrow Club's annual banquet in Champaign.

Faculty Awards and Honors

J. Kent Mitchell, professor of agricultural engineering and head of the department's soil and water division, was honored April 24 with the Everitt Award for Teaching Excellence. The award, which recognizes outstanding performance in undergraduate instruction by engineering faculty, was presented at the 23rd annual Engineering Awards Convocation on the Urbana-Champaign campus. It consists of a plaque and a \$1,000 prize.

William R. Nelson, Jr., professor of landscape design and Extension horticulture specialist, has been honored with the Silver Seal Award of the National Council of State Gardens, Inc. This award, which is the highest of its kind presented to an individual, institution, or organization, recognizes special contributions toward advancing the work of garden clubs.

William L. Ogren, professor of plant physiology/USDA and leader of the photosynthesis research unit, was recently elected to the prestigious American Academy of Arts and Sciences. He is one of twenty-one UI faculty who are currently members of the academy.

A international honorary society composed of distinguished scientists, scholars, artists, and public figures, the AAAS was founded in 1780 by John Adams and other leaders of the American Revolution. The society also conducts interdisciplinary seminars on issues of national or international importance.

Among additional honors, Ogren has been elected secretary of the American Society of Plant Physiologists and will begin his two-year term in October, 1987.

Mary Frances Picciano, professor of nutrition, has received the 1987 Lederle Award of the American Institute of Nutrition. The award, which was presented April 1 at the AIN annual dinner in Washington, D.C., recognizes Picciano's outstanding professional contributions in nutrition research and education.

Wallace E. Reynolds, Extension agriculture adviser, Boone County, was recently honored by the Boone County Soil and Water Conservation District with its "Outstanding Contribution to Conservation Education" Award. Reynolds received the conservation education award at the district's 1987 annual meeting.

Sidney L. Spahr, professor of dairy management, is a 1987 recipient of the MSD-AGVET Dairy Management Research Award, given by the American Dairy Science Association. The award, which recognizes innovation, originality, resourcefulness, and vision in conducting dairy management research, was presented June 23 at the ADSA annual meeting in Columbia, Missouri.

Spahr was cited for his internationally recognized research achievements in dairy automation and the use of electronics in dairy cattle management. This technology has been programmed into a unique "management by exception" concept.

Donald G. White, professor of plant pathology, was honored May 7 with the Burlington Northern Foundation Faculty Achievement Award for excellence in teaching and research. The prestigious award, which included a \$3,000 prize, was presented at a campuswide awards banquet held in the Illini Union.

Nominations for the award are made by UIUC students, faculty, and alumni, with final selection by a campuswide committee. The Burlington Northern Faculty Achievement Award was established in 1985.

Delmar F. Wilken, professor of farm management emeritus and former state leader of FBFM fieldmen, received the Honorary Award of the Illinois Society of Professional Farm Managers and Rural Appraisers (ISPFMRA) at the society's annual meeting in February. Wilken was cited for his leadership and service to Illinois agriculture in implementing effective farm business analysis and recordkeeping systems.



A portion of the new UI Plant Sciences Greenhouses/Headhouse complex takes shape on the construction site east of Turner Hall. The \$10.12 million greenhouse facility is now more than 80 percent completed and is expected to be ready for occupancy by the end of 1987.

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AgriView



College of Agriculture University of Illinois at Urbana-Champaign

Winter, 1987-88

MAR 16 1988

November Ground-Breaking For Imported Swine Research Facility

Illinois pork industry leaders, state legislators, and University officials joined in an impressive ground-breaking ceremony on November 14 for a \$1.84 million Imported Swine Production and Research Facility on the Urbana-Champaign campus.

When completed in late 1988, the one-story structure will contain more than 20,000 square feet of research space and provide modern quarters for some 200 head of swine breeding stock to be imported from the People's Republic of China.

It will include swine breeding, gestation, farrowing, nursery, growing, and finishing units linked by a central corridor, as well as a solar pond for heating and a state-of-the-art lagoon having water recycling capabilities.

A planned Imported Swine Genetic Research Program will enable UI animal scientists to investigate the unique genetic characteristics of three Chinese swine breeds and eventually combine the most desirable, heritable traits of the imported pigs with those of domestic breeds. Chinese swine have long been noted for their reproductive capability, prolificacy, and resistance to certain major swine diseases.

The genetic research program will be augmented by studies in several related scientific areas, including swine breeding and genetics, reproductive physiology, nutrition, environmental physiology, animal behavior, immunobiology/immunogenetics, muscle biology, and meat science. The long-range goal of this multi-faceted research effort is to improve the production efficiency and profitability of the Illinois pork industry.

In his remarks at the ground-breaking ceremony, College dean **John R. Campbell** stressed the tremendous economic potential of the new facility and its planned research projects. "Every pork-producing state in this nation — as well as those in many foreign countries — will be watching as we develop a comprehensive research program and the basic information needed to help Illinois pork producers improve the efficiency of pork production."

Campbell added that the ground-breaking symbolizes "a pair of Illinois firsts" in terms of exploring the genetic potential of imported swine breeds. "Illinois is the first state and the University of Illinois is the first American university to construct and prepare facilities for the importation of Chinese pigs," he said.



Illinois pork industry leaders and other dignitaries took part in official ground-breaking ceremonies for a new Imported Swine Production and Research Facility on November 14. Shown with their specially designed "Illinois shovels" at the South Farms site were (l. to r.) W. Reginald Gomes, head of the UI Department of Animal Sciences; John F. Rundquist, prominent Illinois pork producer from the Butler area and a member of the Imported Swine Genetic Research Program advisory committee; Vince Demuzio, state senator from Carlinville and a major legislative supporter of the project; and College dean John R. Campbell. In the center of the group is an architectural drawing of the planned swine research facility.

UI president **Stanley O. Ikenberry** also emphasized the importance of the new facility in a rapidly changing global society where economic competitiveness and the development of new technology go hand-in-hand. "We are now living in a global society, a global economy, where both science and technology and economic competitiveness take on a new shape, a different meaning than they have had in our past history."

"The fact that we are gathered here today to break ground for the College of Agriculture is a milestone in its own right. And it is symbolic of the leadership the College is providing in the international dimension," Ikenberry said.

Construction of the Imported Swine Production and Research Facility received the formal approval of the Illinois General Assembly in 1985; and funds for the \$1.84 million project were released by Governor **James R. Thompson** in mid-1986. The building will be located near the intersection of First Street and Hazelwood Drive, just south of the UI Assembly Hall.

The capital project received the strong support and endorsement of numerous Illinois legislators, led by state senator **Vince Demuzio** of Carlinville. It also attracted the support of several statewide farm groups and agricultural organizations, including the Illinois Pork Producers Association, the Illinois Farm Bureau, the Illinois Grange, the Illinois Farmers Union, and others.

A twenty-two member advisory committee has been organized to guide the planned research effort and to determine when genetic materials developed in the program are ready for release to the Illinois pork industry. The membership of this advisory committee includes prominent pork industry representatives from throughout the state.

Jerry King, president of the Illinois Pork Producers and a member of the statewide advisory committee, noted that close and continuing cooperation between the University of Illinois and the Illinois pork industry will be needed in launching the genetic improvement program for commercial swine production.

"The University of Illinois is charged with the responsibility of developing the genetic material to the point where it can be effectively utilized by the swine industry of our state. The advisory committee is charged with the responsibility of determining when we have reached that point — when that material can be released for use by our industry," King said.

"I think we're all aware of the impact that hybrid seed production had on the corn industry," King added. "Future generations may well have the opportunity to look back and see this project of the University of Illinois as having a similar impact on our swine industry."

Campbell indicated that one of the truly exceptional genetic traits of Chinese pigs is their prolificacy. He noted that Chinese breeds typically produce an average of 14 to 16 weaned pigs per litter, as compared to only 7 to 8 weaned pigs per litter for our domestic swine breeds. Additionally, the various Chinese breeds exhibit resistance to certain troublesome swine diseases, notably baby-pig diarrhea.

"These highly important economic traits, when incorporated into our domestic swine by conventional cross-breeding or molecular genetics techniques, promise to contribute to greater profitability among Illinois pork producers," he concluded.

Importation of the Chinese swine is an outgrowth of an historic 1985 agreement between the State of Illinois, the UI College of Agriculture, and the government of the People's Republic of China to exchange agricultural technology, plant and animal germplasm, and human resources. Tentative plans call for the importation of 200 head of breeding stock, representing three major Chinese swine breeds, in the fall of 1988.

The College will be working closely with the U.S. Department of Agriculture to arrange for the acquisi-

tion and quarantine of the Chinese pigs. The animals will undergo a five-month isolation period and a rigorous health check at the Harry S. Truman Center off the coast of Florida before being transported to the new UI facility in early 1989.

Economic benefits from the planned research are expected to be substantial. Preliminary research indicates that the use of first-generation crosses of Chinese and western breeds in commercial swine operations can reduce actual production costs five to six dollars per weaned pig. This would translate into an annual savings of \$50 to \$60 million for Illinois pork producers, adding about \$2000 to the net income of the average Illinois swine operation.

\$250,000 Bunn-O-Matic Gift Establishes Gardner Advising Award

A recent gift of \$250,000 from the Bunn-O-Matic Corporation of Springfield, Illinois has established the **Karl E. Gardner Endowment Fund** at the University of Illinois. Income from this major new endowment will provide annual awards for outstanding undergraduate advisers in the College of Agriculture, beginning with the 1987-88 academic year.

The new faculty recognition for excellence in undergraduate student advising and counseling will be formally known as the **Karl E. Gardner Outstanding Undergraduate Adviser Award**. It was created by **George R.** and **Arthur H. Bunn** of the Bunn-O-Matic Corporation to honor the many personal and professional achievements of **Karl E. Gardner**, long-time faculty member and administrator in the College.

Gardner joined the UI dairy extension staff in 1940 and later served for three years as a nutritionist with the U.S. Army Medical Corps during World War II. He rejoined the faculty of the UI Department of Dairy Science as an assistant professor in 1946 and subsequently was appointed associate dean and director of resident instruction for the College of Agriculture in 1959. Gardner served with distinction in this administrative role until his retirement in 1977.

During his eighteen-year tenure as associate dean, Gardner placed particular emphasis on effective student advising and counseling in the College. Prior to his appointment as associate dean, Gardner also served for sixteen years as a faculty adviser to the local chapter of Alpha Gamma Rho fraternity.

The Karl E. Gardner Outstanding Undergraduate Adviser Award will be presented annually at the all-college faculty awards program. Each award winner will receive a certificate of recognition and an unrestricted personal award of \$1,000. Following the prescribed nomination and selection process, the first Gardner Award will be given on March 22, 1988.

AgriView

Campbell's Comments

by John R. Campbell, Dean



The coming of the New Year affords an excellent opportunity for me to wish the College's faculty, staff, students, and alumni continued personal and professional success during 1988 and beyond. The beginning of a new calendar year also represents a unique vantage point in time — an occasion to reflect on the College's many past achievements and to assess our present capability to respond to emerging challenges and opportunities.

I am very proud to report that our College has compiled an impressive record of public service and professional achievement during 1987 and enters the New Year in a position of great strength. This past success has not been achieved by chance; rather, it is an implicit tribute to the remarkable ingenuity, professionalism, and dedication of our fine faculty and staff.

Not surprisingly, this issue of *AgriView* documents a number of the College's "success stories" in developing and implementing effective teaching, research, and extension programs. The following are but a few examples of ongoing faculty programs and activities that are truly responsive to emerging societal problems and needs:

- With the financial support of our Ag Alumni Association's development fund, a faculty team is initiating a new course in agribusiness decision-making — one that will undoubtedly help better prepare our students for future management and leadership roles in a changing global economy.
- Faculty and administrators in the School of Human Resources and Family Studies are developing new graduate fellowships and degree programs, as well as expanded educational opportunities for undergraduate students in such high-demand career areas as restaurant management, interior design, and apparel marketing.

- A cadre of animal scientists are working closely with pork industry representatives to develop a comprehensive Imported Swine Genetic Research Program — a project that will eventually improve the profitability and economic competitiveness of Illinois swine operations.

- Extension educators are developing innovative approaches to meet the complex problems and needs of our statewide clientele, as reflected in the many awards received during 1987 for educational programs in agricultural marketing, financial management, human development, nutrition, parks and recreation, plant pathology, rural sociology, safety, soil conservation, 4-H/youth, and other key areas.

- Faculty committees representing agricultural communications, agricultural education, and extension education are currently laying the groundwork for the formation of a new academic department — one that will provide expanded educational and research capability in the agricultural social sciences; foster increased interdisciplinary cooperation; and enable us to better serve resident and extramural students, as well as our statewide adult clientele groups.

- College scientists in several academic disciplines have recently launched high-priority research projects in the promising area of value-added agricultural research — forward-looking work designed to generate new agricultural products, processes, and services beneficial to the Illinois economy.

As the College moves forward with its ambitious building and remodeling program, it is useful to remind ourselves that these sophisticated new facilities are but "tools" to augment human ingenuity and innovation — physical resources to be used wisely and effectively in fulfilling our expansive land-grant mission. Certainly, the programmatic "success stories" of 1987 amply demonstrate the ability of our faculty and staff to maximize the use of innovation, practical know-how, and available resources in service of humankind. My very best wishes for success in this challenging endeavor during 1988!

Weir to Keynote Upcoming College Awards Program

Morton W. Weir, interim chancellor of the University of Illinois at Urbana-Champaign, will present the keynote address at the 1988 College of Agriculture/Paul A. Funk Recognition Awards Program. The banquet program is scheduled for 6:30 p.m., March 22, in the Illini Union Ballroom.

Weir's address is entitled, "What's Happened to Quality in American Education?"

Three College faculty members will be formally honored with the Paul A. Funk Recognition Award; and

six will receive the recently established Faculty Awards for Excellence in Extension, Research, and Teaching.

Three new awards for outstanding professional achievement will be presented for the first time this year: The Karl E. Gardner Outstanding Undergraduate Adviser Award; the John Clyde and Henrietta Downey Spittler Teaching Award; and the Academic Professional Award for Excellence in the categories of "sustained excellence" and "innovation and creativity." Other faculty members receiving major professional honors during 1987 also will be recognized.

Banquet tickets are available from the various departments and administrative units in the College, as well as from the Office of the Dean, 101 Mumford Hall.

Grad Programs, Student Recruitment Are Top Priorities in SHRFS

Expansion of graduate programs and recruitment of outstanding graduate students represent top priorities in the School of Human Resources and Family Studies, says SHRFS director **Sharon Y. Nickols**. Recent developments in the School indicate that substantial progress is being made in both of these key areas.

A new Ph.D. option in human development and family ecology is now available in the School, following the formal approval of the UI Graduate College in February, 1987. Other Ph.D. programs currently offered by the School include those in foods and nutrition and in family and consumption economics.

The Division of Textiles, Apparel, and Interior Design (TAID) recently received a \$900 grant from the Graduate College for use in graduate student recruitment. The ultimate goal of this expanded recruitment effort, according to Nickols, is to bring increased numbers of students into both the master's degree programs in textiles and apparel and the interior design emphasis in the general home economics master's program.

The Division sponsored a booth at the 1987 annual meeting of the American Home Economics Association, held June 28-July 2 in Indianapolis. Computer-aided design equipment was displayed, along with information on other aspects of the TAID graduate program.

"Several recently established graduate fellowships — including two named for long-time faculty members and administrators in home economics — will provide a financial base for more competitive graduate recruitment," Nickols noted.

Charlotte Biester, a 1921 UI education graduate, established the **Alice and Charlotte Biester Graduate Fellowship** in 1986 to support outstanding graduate students enrolled in the School. In addition, she provided funds to award two fellowships for the 1986-87 academic year. Biester's recent gift brings the total fellowship endowment to \$50,000.

Biester also recently established the **Charlotte Biester Development Fund** with gifts valued at more than \$49,000. The net income from the fund will be used by the School for student internships and young faculty development, as well as for other enrichment opportunities. Because she has already established a fellowship program, none of the income from the Development Fund will be used to provide fellowships.

Bertha J. Berger, who earned her bachelor of science degree in the UI Department of Home Economics in 1942 and her master's degree in 1949, has established the **Jessie Fox Kinnear Fellowship Fund** in honor of her mother. Mrs. Kinnear was a 1917 graduate of the UI Department of Home Economics.

As a memorial to the late **Janice M. Smith**, head of the UI Department of Home Economics from 1949 to 1971, a new graduate fellowship fund was established in the School during 1986. Gifts to the **Janice M. Smith Graduate Fellowship Fund** have been received from more than seventy alumni, faculty colleagues, family,

and friends. According to Nickols, this new fund now totals approximately \$24,000; and additional gifts are still being accepted.

The **Marilyn M. Dunsing Graduate Fellowship Fund** in family and consumption economics was established following Dr. Dunsing's recent retirement as director of the School. Dunsing served as SHRFS director from 1979 to 1985. Fund-raising activities for this fellowship are currently being organized by faculty and graduates of the Division of Family and Consumer Economics.

Nickols emphasized that her highest priority for student financial assistance was to increase the number of graduate fellowships in the School. "Supporting graduate education is essential to building the quality of home economics education and service programs in the future. Research and teaching positions at other higher education institutions are plentiful; and the University of Illinois can play a major role in providing academic leaders to assume these responsibilities."

With the support of the College administration, the School is now obtaining new faculty resources to meet instructional needs in areas of strong career interest and enrollment growth. Nickols noted that a new faculty position has recently been authorized in hospitality management, enabling the School to accommodate rapidly growing enrollments in its popular restaurant management program.

A total of 110 students enrolled in the undergraduate restaurant management program for the 1987-88 academic year; of this group, thirty-four are freshmen. "The hospitality industry indeed represents one of the fastest growing sectors in the U.S. economy, and prospects for student placement are excellent," Nickols said.

A new faculty member also is being recruited in the area of applied family studies. This position will help support the marriage and family therapy program, jointly offered by the School of Human Resources and Family Studies and the School of Social Work, and the new Ph.D. option in human development and family ecology.

Among additional staffing changes, two part-time academic professional positions have been designated for the Division of Textiles, Apparel and Interior Design to accommodate heavy teaching responsibilities in that division. "Continued high student demand for majors in textiles and apparel marketing and in interior design has triggered this need," Nickols said. One of the new staff members teaches beginning interior design studio courses, while the second teaches courses in the textiles and apparel area.

Nickols emphasized that the School's current program expansion, staffing changes, and graduate student recruitment efforts would enhance its ability to meet emerging educational and career opportunities. "We must respond to changing societal trends, such as increases in food consumption outside the home. In recent years, tremendous changes also have occurred in how families meet everyday needs for food and shelter and in what we expect of family relationships. Home economics programs must continually change and grow to keep abreast of these trends."

Ag Development Fund Helps Launch New Course in Ag Decision-Making

The Ag Development Fund, a long-time supporter of scholarships and experiential learning programs in the College of Agriculture, has provided \$5,000 for the 1987-88 academic year to help launch a new "hands on" course in agribusiness decision-making.

Michael A. Hudson, assistant professor of management and marketing and a 1987-88 Lilly Teaching Fellow, is the primary instructor and coordinator of "Assessing Tomorrow's Agribusiness Environment." The new course, which has received \$6,000 in additional funding support from the Lilly Foundation Teaching Endowment, is intended for upper-level undergraduate students and those pursuing advanced degrees.

Hudson emphasized that the course is designed to bring students face-to-face with major problems and issues of concern to agribusinesses and agricultural organizations today. "It will help move students beyond the broad theoretical concepts underlying agribusiness decision-making to their practical application in everyday management situations."

The planned course will incorporate an executive-in-residence component, bringing students into direct contact with prominent agribusiness executives in a decision-making environment. Six executives from Illinois and regional agribusiness firms will teach two class sessions each, focusing on current management problems and issues faced by their respective enterprises.

Primary areas of emphasis for the course will include managing for change; issues in marketing, sales, and promotion; ethics and personnel issues; and internationalization of agribusiness enterprises.

Class participants will have an opportunity to interact extensively with the various executives-in-residence, thus honing their process skills. "Students will also conduct background research on specific management problems and issues, develop practical solutions, and experience the 'real world' decision-making process," Hudson said.

"Assessing Tomorrow's Agribusiness Environment" will be offered for the first time during the spring, 1988 semester and will be team-taught by Hudson and **Steven T. Sonka**, professor of production economics.

Hudson noted that the planned course focuses on a high-priority issue explored at a recent College-sponsored strategic planning conference — that of developing effective management skills among current and future agricultural decision-makers. "College juniors and seniors will soon be assuming decision-making responsibilities in a highly complex agribusiness environment; and it is extremely important that we prepare them well for this challenging role."

The Ag Development Fund, which provided initial monetary support for the new course, is the primary funding mechanism of the College of Agriculture Alumni Association. It has helped launch a number of highly successful enrichment programs and activities in the College, including the original Executive-in-Residence Program and student field-study tours in 1972.

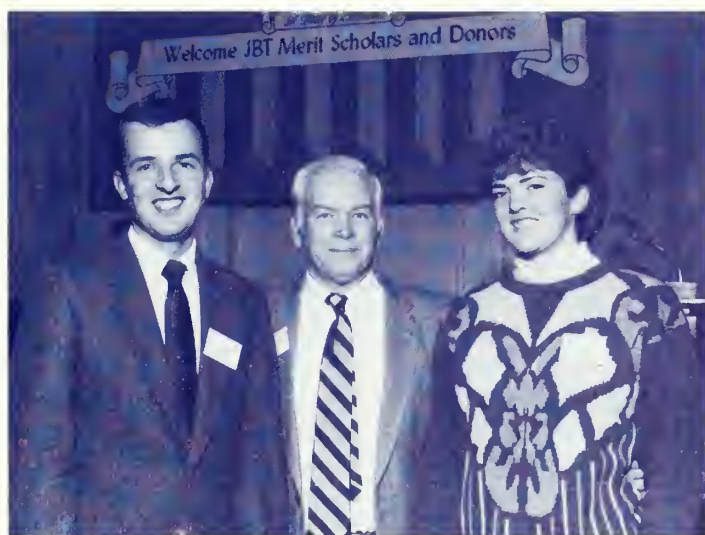
\$104,000 National Ag Library Grant Supports Lab Animal Welfare Project

The National Agricultural Library (NAL) has awarded a grant of \$104,000 to **Carol A. Boast**, agriculture librarian and professor of library administration; **Maria A. Porta**, assistant agriculture librarian; and **Cheryl R. Nyberg**, assistant law librarian. The recent NAL grant will support the preparation of two or three books in the Laboratory Animal Welfare Series.

The research series is designed to implement Section 1752 of the Food Security Act of 1985. Its purpose is to help prevent unintended duplications of animal experiments by improving access to existing research literature, databases, library collections, experts, and relevant organizations.

The series also is intended to help improve methods of animal experimentation by increasing access to existing statutes, regulations, and standards pertaining to laboratory use of animals. In addition, it will provide increased access to various books and audio-visual materials useful in training researchers, veterinarians, laboratory technicians, and others engaged in animal experimentation.

Stanley E. Curtis, professor of animal science and an internationally recognized expert on animal welfare, is advising the NAL on all of its animal welfare information activities, including the new Illinois project. *Individuals seeking further information about these activities should contact either Carol A. Boast (217/333-7687) or Stanley E. Curtis (217/333-7861).*



Homer White (center), a longtime JBT Agricultural Merit Scholarship donor and a former member of the Ag Alumni Association board of directors, poses with "his" 1987 JBT scholarship recipient, **Denise A. DeHaan** (r.) of Richmond, Illinois. Also attending the ninth annual JBT recognition awards banquet on December 2 was **Kevin C. DeHaan** (l.), Denise's brother and a 1981 JBT Scholar. Kevin recently was awarded a JBT Graduate Fellowship and is now pursuing doctoral studies in the UI Department of Animal Sciences. Denise is an agricultural economics major in the College. A total of 530 JBT scholarships have been awarded since 1979.

Ag Education Faculty Join College; New Academic Department Planned

Long-term efforts to form a new academic department merging agricultural communications, agricultural education, and extension education components moved one step closer to realization with the approved transfer of three agricultural education faculty to the College of Agriculture.

Moving from the Department of Vocational and Technical Education/Division of Agricultural Education in the College of Education to the College's Office of Agricultural Communications and Extension Education (OACEE) are professor **Burton E. Swanson**, associate professor **Earl B. Russell**, and assistant professor **Edward W. Osborne**.

All three are regular tenure-track faculty. Swanson holds an appointment as research director in the International Program for Agricultural Knowledge Systems (INTERPAKS) in addition to his professorial appointment in international agricultural education. Russell currently heads the College's agricultural education program.

The faculty transfer, which was effective at the beginning of the 1987-88 academic year, received the formal approval of **Robert Berdahl**, UIUC vice chancellor for academic affairs in May of 1987.

Efforts to merge agricultural communications, agricultural education, and extension education faculties within the College have been underway since early 1983. At that time, a joint committee representing the Colleges of Agriculture and Education recommended the formation of a new academic unit encompassing these three interrelated disciplines.

The merger recommendation followed the earlier formation of INTERPAKS, a multidisciplinary program administered by the College's Office of International Agriculture and involving faculty members from the three academic areas. INTERPAKS is an international research, teaching, and technical assistance program focusing on agricultural knowledge systems and the social science aspects of agricultural development.

In November, 1986, faculty members in the Division of Agricultural Education developed a formal merger proposal in concert with agricultural communications and extension education faculty in the College, supporting the creation of a new department incorporating the three academic components. The proposal enumerated several closely shared educational and research missions, academic interests, and target clientele groups with that of faculty in the previously organized OACEE.

This initial proposal received the unanimous endorsement of the College's Educational Policy and Faculty Executive Committees in early 1987. According to associate dean **William L. George**, who is coordinating the proposed departmental merger, three faculty committees have been named to work out specific details of departmental organization and staffing, courses and curricula, and graduate degree programs. This information is being incorporated in a formal

proposal that will be submitted for College and campus approval.

The initial (1986) proposal to create a new academic department noted that the merged faculties could add a strong "human dimension" to the overall academic programs of the College. "Through an aggressive program in teaching, research, and public service, the department can help provide a balance between technological developments in agriculture and the broader human issues of farm living, rural education, rural community life, and urban agriculture."

Additional benefits of organizing the new department, as outlined in this proposal, would include "bringing together a wider range of research skills and perspectives related to agricultural knowledge systems and human resource development." At the same time, the merger would provide a viable mechanism for transmitting new technical knowledge and skills to undergraduate agricultural education students, keeping them abreast of "the rapid technological advances in the agricultural sector."

College dean **John R. Campbell** emphasized that a merger of the three related academic components "would facilitate expanded agricultural leadership training for students enrolled in the College — a critical need in today's changing agriculture." "It also would encourage greater faculty interaction in social science areas and promote the growth of interdisciplinary or multidisciplinary programs," he added.

"Expanded linkages between the present agricultural education faculty and the College's Vocational Agriculture Service (VAS) would have positive statewide implications for both secondary and post-secondary education," George said. Both agricultural education and VAS faculty members have been extensively involved in planning and developing the new Chicago High School for Agricultural Sciences, which has received national media attention for its innovative programs and enthusiastic student participation.

Students from this urban agricultural high school are expected to enroll in College agricultural and agricultural education curricula beginning in fall, 1989.

George also cited the need for expanded adult and continuing education programs statewide, as the number of older students seeking advanced degrees and professional enrichment continues to grow. "This educational phenomenon underlines the growing importance of our extension education program, which conceivably could draw on the combined professional expertise and other educational resources of the merged department."

Following normal statutory procedures, a proposal to form the new academic department will be submitted to the full College faculty for consideration and approval in early 1988.

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Eight Competitive Grants Awarded For Illinois Value-Added Ag Research

The UI Agricultural Experiment Station has awarded eight competitive research grants for 1987-88 in the broad area of value-added agricultural research. Funding for these value-added research projects totals \$250,000 for the current fiscal year and is provided under a recurring annual state appropriation of nearly \$500,000 for the recently established Illinois Center for Value-Added Agricultural Research.

The value-added agricultural research program, which was planned and initiated with the strong endorsement of Illinois Governor **James R. Thompson** in 1986, will include research thrusts in the broad areas of *crop processing and utilization, product differentiation, co-product utilization, and marketing*. The primary objective of these comprehensive research initiatives is to improve the economic competitiveness, marketability, and utilization of Illinois agricultural products and commodities.

The recently announced research grants will involve sixteen faculty researchers from the UI College of Agriculture and other areas of the University. Several of the funded research projects are interdisciplinary or multidisciplinary in nature and range from one to three years in duration.

Ion C. Baianu, associate professor of food chemistry in the Department of Food Science; and **Richard L. Magin**, associate professor of electrical engineering and bioengineering, will undertake a three-year project to formulate and develop advanced micro-encapsulation technologies for use in engineering new value-added food co-products from cereal grains, cornstarch, and cornstarch derivatives.

The first phase of their project will focus on the refinement/improvement of current liposome micro-encapsulation and hydrophobic protein coating technologies for new intermediate moisture food (IMF) applications. Phase two will involve the formulation and engineering of new, improved IMF products made by micro-encapsulation and extrusion at medium temperatures (38 to 50° C.) and low pressures (10 to 50 psi). The final phase of the project will involve pilot-scale production of micro-encapsulated cereal proteins and cornstarch in hydrated (IMF) cereal grain co-products having improved texture and long shelf-life.

Hans P. Blaschek, associate professor of microbiology in the Department of Food Science; and **Bryan A. White**, assistant professor of microbiology in the Department of Animal Sciences, will conduct a three-year project to develop tailor-made strains of the solvent-producing bacterium, *Clostridium acetobutylicum*, which are able to utilize cellulose as the sole carbon source for the fermentative production of butanol. One major objective of this research will be to develop bacterial strains with improved cellulose hydrolyzing activity and tolerance to the butanol end-product.

These enhanced strains, which will be produced by genetic manipulation, can then be utilized in an economically viable fermentative conversion of various agricul-

tural residues (i.e., stalks, hulls, cobs) to the high-value chemical, butanol. This commercially important chemical is widely used as a feedstock in the plastics industry.

Munir Cheryan, professor of food engineering in the Departments of Food Science and Agricultural Engineering, will investigate the use of continuous process membrane bioreactors to produce ethanol and other high-value chemical feedstocks from grain by-products, particularly cornstarch. In the initial phase of his three-year project, Cheryan will design and fabricate a pilot-scale membrane reactor which can be used to convert cornstarch or glucose into high-value chemical feedstocks such as ethanol, butylene glycol, butanol, and various organic acids. The continuous process bioreactor will employ advanced membrane separation systems and enzyme biocatalysts and is expected to be considerably more productive than conventional batch fermentors.

In the later phases of the project, Cheryan will conduct a performance evaluation of the pilot-scale bioreactor, utilizing the model system to ferment ethanol from glucose. He then will complete an economic analysis of the continuous process bioreactor compared to existing fermentation technology.

Three UI faculty members will conduct a one-year study to assess the impact of expanded agricultural value-added activities on the Illinois economy. **David L. Chicoine**, professor of taxation and public finance policy in the Department of Agricultural Economics and a staff member of the Institute of Government and Public Affairs; **Judith S. Hill**, regional analyst in agricultural economics; and **Geoffrey J. D. Hewings**, professor and head of the Department of Geography, will develop an input/output model to analyze the *direct, indirect, and induced* sectoral economic impacts of various value-added agricultural activities in the state.

The three investigators also will develop a spatial distribution model to estimate the spatial (regional) economic impacts of expanding agricultural value-added sectors. Finally, they will simulate several different scenarios expanding value-added sectors and evaluating their impacts on farming sectors in Illinois, on the Illinois economy as a whole, and on the various regional economies of the state.

In a one-year project, three UI faculty members will examine the impact of business climate factors on agricultural value-added enterprises in Illinois. **David L. Chicoine**, professor of taxation and public finance policy and a staff member of the Institute of Government and Public Affairs; **J. Fred Giertz**, professor of economics and an IGPA staff member; and **Robert W. Resek**, professor of economics and director of the Bureau of Economics and Business Research, will identify and evaluate the various business climate factors affecting the cost of doing business regionally and statewide. These include labor costs, state and local tax burdens, utility and transportation costs, the availability of financial and governmental services, and related factors.

After the various factors comprising the business climate are fully identified, the investigators will develop a quantitative assessment of their regional and statewide effects. The final phase of the project will in-

clude an analysis to determine if business climate factors are significant in explaining the size and location of existing value-added enterprises in Illinois and other states.

Alan L. Kriz, assistant professor of crop molecular genetics in the Department of Agronomy, will conduct a three-year study to evaluate the various genetic factors affecting kernel hardness in maize (corn). Kernel hardness and resistance to stress cracks represent important economic considerations in the corn dry-milling industry and also affect the nutritional qualities of corn products in human and animal diets.

Kriz will compare endosperm protein profiles of various maize mutants (opaque, floury, or soft types) with standard vitreous-kernel inbred lines. He also will utilize various screening and immunoassay techniques to identify hard-endosperm associated proteins in various kernel types and to determine the subcellular localization of such proteins. Gaining a fuller understanding of the structural and biochemical makeup of corn will enable breeders to develop corn varieties having superior milling and nutritional qualities.

J. Bruce Litchfield, assistant professor of food process engineering in the Department of Agricultural Engineering; **Joseph Bentsman**, assistant professor of mechanical and industrial engineering; and **John T. Scott**, professor of farm management in the Department of Agricultural Economics, will examine the application of knowledge-based adaptive control systems to improve grain dryer efficiency and enhance end-product quality. Their three-year project will involve analyzing data that relate transient temperature and moisture profiles in corn kernels to the actual formation of stress cracks. These data will be used to create a comprehensive knowledge base of profiles that ensures optimal grain quality and drying efficiency under constraint of drying rate.

This research team will then design and test an adaptive control system that precisely tracks optimal moisture and temperature profiles under a broad range of drying conditions. Finally, they will examine the economic value and estimated benefits of the knowledge-based system in terms of increased drying efficiency and improved grain quality.

Edward G. Perkins, professor of food chemistry in the Department of Food Science, and **Theodore Hymowitz**, professor of plant genetics in the Department of Agronomy, will undertake a three-year project to modify the fatty acid composition and triglyceride structure of soybean oil and thus increase its product value, utilization level, and market share. Alteration of the fatty acid composition of soybeans, via genetic manipulation, would facilitate the substitution of derived soybean oil for more expensive fats such as cocoa butter.

Using chemical mutation, classical plant breeding, and bioengineering techniques, the researchers will manipulate the genes of selected soybean strains so that the enzymes which influence fatty acid composition are modified. They then will determine the lipid fatty acid composition and triglyceride structure of soybean oils derived from selected starting and mutated soybean

strains. The long-range goal of this interdisciplinary research effort is to expand the utilization level and marketability of Illinois soybeans.

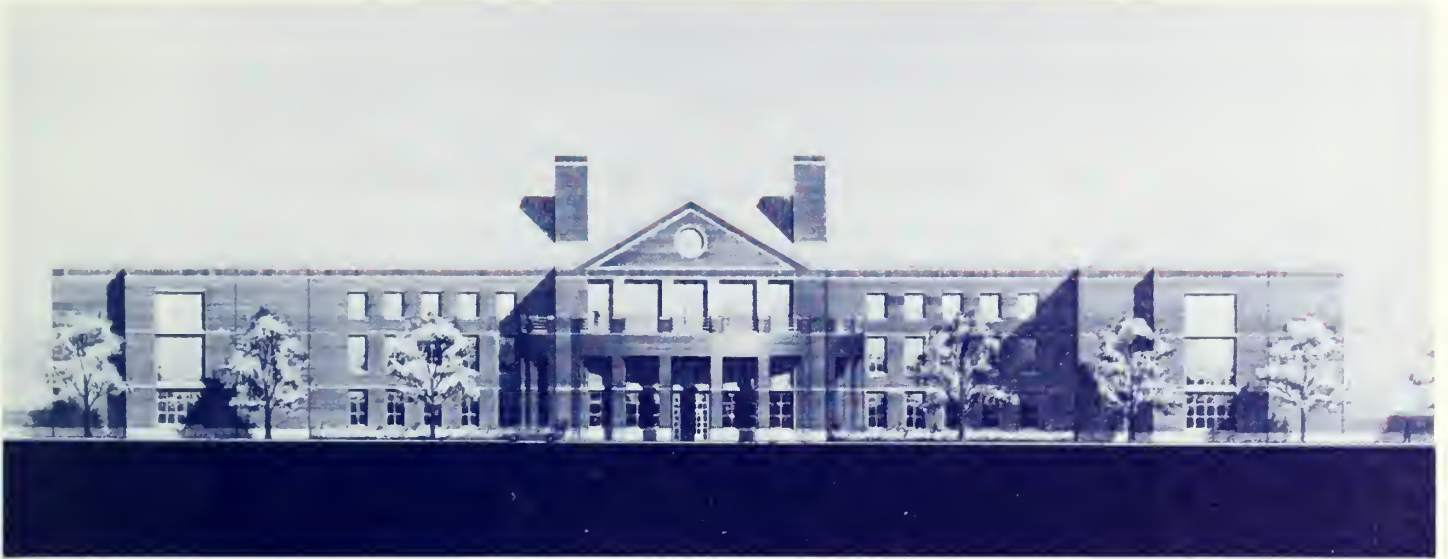
The eight value-added agricultural research projects for 1987-88 are the first ones funded under the competitive grant program, with further grants planned for the upcoming fiscal year. Recurring state funding for the entire value-added program, amounting to \$488,000 annually, is based on the original annual appropriation of \$500,000 less a permanent \$12,000 state base-budget reduction for FY 1988 and beyond.

Additional laboratory space for value-added agricultural research will become available in early 1989 as the \$1.4 million remodeling of the Agricultural Bioprocess Laboratory moves toward completion. A portion of the initial state funding for the Illinois Center for Value-Added Agricultural Research was allocated to this major remodeling effort.



Elaine Kensil, representing the Carl J. Kensil Memorial JBT Scholarship Fund, is shown congratulating 1987 JBT Scholar William L. Hollis (r.) of Bushnell, Illinois. Hollis, who is an animal science major at the University of Illinois, was one of 61 JBT Scholars honored at the 1987 JBT recognition banquet in December. He served as Illinois Foundation FFA state president in 1986-87 and recently was elected national FFA vice-president for 1988.

*Architectural Drawing:
Plant and Animal Biotechnology Laboratory
University of Illinois at Urbana-Champaign*



Plant and Animal Biotechnology Laboratory — North Elevation



Plant and Animal Biotechnology Laboratory — South Elevation

Overall Size: 170,000 gross square feet (100,000 NASF)

Building Location: Gregory Drive at Goodwin Avenue, Urbana

Target Completion Date: Spring, 1991

Ag Building Projects Move Forward

Several major construction and remodeling projects in the College of Agriculture are moving forward on schedule as calendar year 1988 begins.

On January 6, architectural plans for the proposed \$30 million Plant and Animal Biotechnology Laboratory (PABL) were formally approved by the University of Illinois Board of Trustees. The federally funded biotechnology facility, containing approximately 170,000 gross square feet of space, will be sited at the intersection of South Goodwin Avenue and West Gregory Drive. It will be in the Georgian architectural style, blending well with many older campus buildings, and will include a third-story greenhouse component on its southern exposure.

Construction documents for the new PABL will be prepared beginning in February and actual construction bids for the building will be sought by June or July. Target date for completion of the PABL is spring, 1991.

Architectural plans for the \$17.5 million Animal Sciences Laboratory (ASL) remodeling and addition also will be submitted to the UI Board of Trustees for their approval in February. If approved, this major project will move into the construction bid stage by July or August of this year. Target date for completion of the ASL project is spring, 1992.

Among additional projects, a \$1 million Goodwin Avenue relocation will begin in April or May of 1988, preparing the site for the new PABL. Goodwin Avenue will be closed south of Gregory Drive, necessary site preparation and utilities work will be done, and relocated staff parking will be established at the former UI motor pool facility. This project is expected to be completed by the beginning of the fall, 1988 semester.

Contracts for the \$1.4 million Agricultural Bioprocess Laboratory (ABL) remodeling have been let, and the work is now underway. The first floor and basement levels of the former Dairy Manufactures Building will be completely remodeled by late 1988. The remodeled facility will be used by INTSOY staff and faculty of the Departments of Food Science and Agricultural Engineering for value-added bioprocessing research.

Faculty members of the Department of Horticulture recently moved into laboratories and office space in the newly completed Plant Sciences Greenhouses and Headhouse complex. The \$10.5 million plant sciences facility, the final project of the Food for Century III program, will provide environmentally controlled greenhouses, laboratories, and support space for the Departments of Forestry, Horticulture, Plant Biology, and Plant Pathology. Administrative offices of the Department of Horticulture will now be permanently housed in the headhouse building.

The 60,000-square-foot complex features ten greenhouse ranges, specialized teaching and research laboratories, several growth chambers and coldrooms, a soil preparation area, and a plant conservatory adjacent to the headhouse. A tunnel links the new facility with the present Agronomy Greenhouses, just south of Turner Hall.

Faculty Research Grants

The following research grants have been awarded to faculty members of the UIUC College of Agriculture for start-up dates from June 1, 1987 through December 1, 1987. Parenthesized information indicates the awarding agency or organization, the total dollar amount of the research grant, and its duration.

Peter J. Bechtel, Ricardo Villota, Floyd K. McKeith, and Jan E. Novakofski, Department of Animal Sciences, "Increasing Consumer Demand for Beef with New Extruded Beef Products" (*National Livestock and Meat Board/Beef Research Program*, \$14,372, 6/1/87 to 5/31/88).

Bryan A. White, Department of Animal Sciences, "Cellulose Degradation by Ruminococcus Species: Genetic and Molecular Analysis" (*U.S. Department of Agriculture*, \$250,000, 7/1/87 to 6/30/90).

Harold W. Gonyou, Department of Animal Sciences, "An Evaluation of a Computer Controlled Individual Feeding System for Group-Housed Sows" (*National Pork Producers Council*, \$7,500, 7/1/87 to 6/30/88).

Constantin A. Rebeiz, Department of Horticulture, "Identification of Natural and Synthetic Photodynamic Herbicide Modulators" (*U.S. Department of Agriculture*, \$100,000, 7/1/87 to 6/30/89).

Bryan A. White, Department of Animal Sciences, "Enzymatic and Genetic Analysis of Ruminococcus Cellulases" (*U.S. Department of Agriculture*, \$250,000, 7/1/87 to 6/30/90).

Lawrence B. Schook, Harris A. Lewin, and David G. McLaren, Department of Animal Sciences, "Swine Histocompatibility Antigens and their Association with Health and Production" (*National Pork Producers Council*, \$10,000, 7/1/87 to 6/30/88).

Dale A. Law, Office of Agricultural Communications and Extension Education, and **John E. Smith**, Vocational Agriculture Service, "Vocational Education Service — A Model System for Continuous Dissemination of Technical Teaching Aids and Delivering Inservice Education" (*Illinois State Board of Education/DAVTE*, \$317,412, 7/1/87 to 6/30/88).

Dale A. Law, Office of Agricultural Communications and Extension Education, and **Jerry D. Pepple**, Vocational Agriculture Service, "Agricultural Core Curriculum Revisions" (*Illinois State Board of Education/DAVTE*, \$100,000, 7/1/87 to 6/30/88).

Peter J. Bechtel, Ricardo Villota, Floyd K. McKeith, and Jan E. Novakofski, Department of Animal Sciences, "New Concept: Extruded Pork Products" (*National Pork Producers Council*, \$7,000, 7/1/87 to 6/30/88).

Harris A. Lewin and Lawrence B. Schook, Department of Animal Sciences, "Molecular Analysis of the Bovine Major Histocompatibility Complex" (*U.S. Department of Agriculture*, \$110,000, 8/1/87 to 7/31/89).

Lawrence B. Schook and Michael J. Myers, Department of Animal Sciences, "Dimethylnitrosamine Effects on Cellular Immunity" (*National Institutes of Health*, \$106,703, 8/1/87 to 7/31/92).

Marvin R. Paulsen and James B. Sinclair, Department of Agricultural Engineering, "Optical Properties of Damaged Soybean Seeds Using Image Processing" (*American Soybean Association*, \$20,900, 8/1/87 to 7/30/89).

Cecil D. Nickell, Department of Agronomy, "Generation Advance and Field Evaluation of Soybean Breeding Lines" (*Illinois Soybean Operating Board*, \$37,950, 8/21/87 to 8/20/90).

Stephen K. Farrand, Department of Plant Pathology, "Crown Gall Control: Plasmid Engineering to Maximize Control and Minimize Failures" (*U.S. Department of Agriculture*, \$100,000, 9/1/87 to 8/31/89).

Lawrence E. Schrader and Theodore Hymowitz, Department of Agronomy, "Management of the USDA Perennial Glycine Germplasm Collection" (*U.S. Department of Agriculture/ARS*, \$48,500, 9/1/87 to 8/31/89).

Wayne L. Banwart and O.A. Dolske, Department of Agronomy, "Interaction of Acid Rain and Drought Stress on Yield and Growth of Corn" (*U.S. Department of Agriculture*, \$90,000, 9/1/87 to 12/31/88).

Walter L. Hurley and Bruce L. Larson, Department of Animal Sciences, "Characterization of Commercial Dried Wheys" (*Milk Specialties Co.*, \$10,000, 9/1/87 to 8/31/88).

Michael R. Jeffords, Joseph V. Maddox, and K.W. O'Hayer, Office of Agricultural Entomology, "European Microsporidia as Biological Control Agents of the Gypsy Moth in North America" (*U.S. Department of Agriculture*, \$150,000, 9/15/87 to 9/30/90).

Robert H. Hornbaker, Department of Agricultural Economics, "Input Use, Government Programs, and Farm Size" (*U.S. Department of Agriculture/ERS*, \$10,000, 9/30/87 to 9/30/88).

David A. Lins, Department of Agricultural Economics, "Omissions in Farm Sector Balance Sheet/Benchmarking Recordkeeping and Sample Data" (*U.S. Department of Agriculture*, \$7,500, 9/30/87 to 9/30/88).

David L. Thomas, Philip J. Dziuk, and Harris A. Lewin, Department of Animal Sciences, "Improvement of Prolificacy of U.S. and Israeli Sheep Populations Through Inclusion of the F-Gene of the Booroola Merino" (*Binational Agricultural Research and Development Fund*, \$189,000, 10/1/87 to 9/30/90).

John A. Juvik, J.K. Pataky, and David B. Dickinson, Department of Horticulture, "Introgression of Resistance to Northern Leaf Blight into Sweet Corn with the Sugary Enhancer (Se) Gene: A Genetic and Epidemiological Study" (*Binational Agricultural Research and Development Fund*, \$200,000, 10/1/87 to 9/30/90).

Jan E. Novakofski, Floyd K. McKeith, Tom R. Carr, and Peter J. Bechtel, Department of Animal Sciences, "Beef Surimi-Product Development and Product Characterization" (*National Livestock and Meat Board/Beef Research Program*, \$16,223, 10/1/87 to 9/30/88).

Wesley D. Seitz, Department of Agricultural Economics, "Judgement-Based Watershed Modeling" (*U.S. Department of Agriculture/SCS*, \$69,955, 10/1/87 to 9/30/88).

Raymond M. Leuthold and Philip Garcia, Department of Agricultural Economics, "Price Relationships in Commodity and Product Markets: Behavior and Analysis" (*U.S. Department of Agriculture/ERS*, \$17,000, 10/1/87 to 9/30/89).

Michael C. Hirschi, Department of Agricultural Engineering, "Surveying Review" (*Illinois Department of Transportation*, \$15,871, 11/1/87 to 5/31/88).

Jimmy H. Clark, Department of Animal Sciences, "Effect of Frequency of Feeding and Feed Processing on Rumen Fermentation, Diet Acceptability, Milk Production, and Milk Composition" (*Illinois Corn Marketing Board and Illinois Department of Agriculture*, \$20,213, 12/1/87 to 1/1/89).

College Inaugurates Spitler Teaching Award

A major new faculty award recognizing outstanding achievement and professional excellence in teaching has recently been established within the UI College of Agriculture. To be known as the **John Clyde and Henrietta Downey Spitler Teaching Award**, the recognition is open to all faculty members in tenured or tenure-track positions with full-time appointments in the College.

Under the guidelines established for selecting award recipients, faculty teaching is broadly defined to encompass all instructional activities in the College, including those sponsored by the UI Cooperative Extension Service.

Mildred Spitler Johnson, a resident of Urbana, Illinois, has provided funds to create the faculty teaching award in memory of her parents, **John Clyde and Henrietta Downey Spitler**. A well-known extension educator and administrator, John Spitler served as assistant director of agricultural extension in the College from 1937 to 1943. He subsequently was promoted to associate director of agricultural extension and served in that position until 1949.

Nominations for the Spitler Teaching Award will be accepted from academic and professional staff of the College, as well as from undergraduate and graduate students. The recognition consists of a certificate of recognition and an unrestricted personal award of \$500.

One Spitler Teaching Award will be presented annually, beginning with the 1987-88 academic year. The first award will be given at the upcoming all-college faculty award ceremony, scheduled for March 22, 1988 in the Illini Union.

News items and other articles of interest to the College of Agriculture are solicited on a continuing basis. Submit all materials for possible inclusion in upcoming issues of AgriView to Joanne Courson, Office of the Dean, 101 Mumford Hall. Items may be edited for reasons of space and consistency.

Faculty Awards and Honors

Robert A. Aherin, assistant professor of agricultural engineering and extension safety specialist, was honored with the 1987 Packer Engineering Safety Award in December. The award was presented at the international winter meeting of the American Society of Agricultural Engineers, held in Chicago. It is given annually "... to encourage and to recognize outstanding contributions to the advancement of agricultural safety engineering in research, design, education, or promotion."

Seven Cooperative Extension agriculture advisers from Illinois received national awards for 1987 from the National Association of County Agricultural Agents (NACAA).

Among those honored at the professional association's 1987 annual meeting in Fargo, North Dakota were NACAA Distinguished Service Award recipients **Larry L. Camp**, Clay County; and **David B. Fischer**, Clinton County.

Others receiving NACAA recognition and their respective awards included **Carl J. Cantaluppi**, Rock Island County, the NACAA Achievement Award; **Robert W. Frank**, Jackson County, the NACAA Public Information Award (news and photo story category); **Donald E. Meyer**, McLean County, the NACAA Search for Excellence Award; **James E. Schuster**, DuPage County, the LESCO Turfgrass/Horticulture Award; and **Dennis R. Thompson**, Rock Island County, the Dow Study Tour Award.

Samuel G. Carmer, professor of biometry; and **James E. Harper**, professor of plant physiology, have been elected Fellows of the American Society of Agronomy. The society bestowed its highest professional honor on the two UI faculty members at the recent ASA annual meeting in Atlanta, Georgia. Carmer also was recognized as a new Fellow of the Crop Science Society of America.

Eleven Cooperative Extension home economics advisers from Illinois were among those formally honored at the 1987 annual meeting of the National Association of Extension Home Economists (NAEHE), held October 4-8 at Louisville, Kentucky.

Receiving the NAEHE Distinguished Service Award were **Beverly A. Combs**, Clark County; **Robin K. Richey**, Moultrie County; and **JoAnn G. Skabo**, DeKalb County. Winner of the NAEHE National Public Affairs Award was a team composed of **Catherine R. Mauck**, **Janet R. Burnett**, and **Linda C. Stovall**, all from Madison County.

Other Illinois extension home economists honored at the 1987 NAEHE annual meeting included **Donna M. Mann**, Ogle County, who won the Florence Hall Award; and **Cherie A. Bertsch**, Boone County, who received the NAEHE 2000 Fellowship Award. **Margaret L. Esposito**, McLean County, won the NAEHE Continued Excellence Award. The team of **Beverly J. Cruse**,

Stephenson County; and **Donna L. Kaufmann**, Clay County, received the General Foods Consumer Center Media Grant.

Two Illinois home economists also assumed major new roles in the national organization. **Carrollyn L. Hunt**, extension home economics adviser from Marshall-Putnam Counties, was installed as NAEHE president and presided at the 1987 annual meeting. **Sharon Y. Nickols**, professor and director of the UI School of Human Resources and Family Studies, began a two-year term as a member of the NAEHE advisory board.

Robert G. Darmody, assistant professor of pedology; **Ivan J. Jansen**, professor of pedology; **Samuel G. Carmer**, professor of biometry; and **Jeffrey S. Steiner**, graduate research assistant in pedology, won the Outstanding Technical Paper Award at the 1987 National Symposium on Mining, Hydrology, Sedimentology and Reclamation. Their paper was one of three receiving the honor from among seventy technical papers presented at the recent national symposium.

Philip J. Dziuk, professor of reproductive physiology, has been elected a Fellow of the American Society of Animal Science. He was formally recognized during the ASAS 1987 annual meeting, held in Logan, Utah.

A member of the UI animal sciences faculty since 1955, Dziuk is nationally and internationally recognized for his research contributions in the area of animal reproductive physiology. He has authored or co-authored more than 100 refereed journal articles and 10 book chapters in his area of expertise.

Robert D. Espeseth, professor and extension specialist in recreation and park resources, was recently honored with the "Park Professional of the Year" Award by the Illinois Park and Recreation Association. The award, which recognizes Espeseth's distinguished career contributions as a teacher, researcher, author, and consultant, was presented by the IPRA's park and natural resource management section at the association's 1987 annual meeting in Chicago.

Robert W. Frazee, area extension adviser in soil and water conservation for Region IV, was honored with the 1987 Merit Award of the Association of Illinois Soil and Water Conservation Districts. The award, which was presented at the 39th annual meeting of the statewide association in Peoria, recognized Frazee for his outstanding professional contributions to soil conservation and water quality.

Daniel Gianola, professor of animal breeding and genetics; and **Malcolm C. Shurtleff**, professor and extension specialist in plant pathology, were among twenty-three distinguished UI faculty members desig-

Faculty Awards and Honors

nated University Scholars for 1987-88. The prestigious awards were announced by the University of Illinois Foundation at its annual meeting in mid-October.

The University Scholars Program is intended to recognize outstanding faculty achievement and to help attract and retain outstanding faculty members. Gianola and Shurtleff are internationally recognized authorities in their respective fields.

Several UI Cooperative Extension Service faculty members were honored for outstanding professional achievement and public service during the statewide educational organization's annual conference in early November. Receiving the CES Award for Sustained Excellence in Programs and Service were **Darrel L. Good**, professor and extension specialist in agricultural marketing; **Robert J. Reber**, associate professor and extension specialist in nutrition; **David W. Siebert**, area extension adviser and livestock specialist; and **G. William Stone**, associate professor and extension specialist in 4-H/youth.

Receiving the CES Award for Innovative Programming were **Thomas L. Frey**, professor and extension specialist in agricultural finance; and **Anne H. Silvis**, extension specialist in program development. Frey and Silvis were honored for developing and coordinating an innovative farm financial management program, "Your Financial Condition."

A county youth adviser, a three-member county team, and a twelve-member regional team also received the CES Award for Innovative Programming. **Maxine A. Dunn**, Kankakee County extension youth adviser, was recognized for her 4-H food and fitness program for disadvantaged youngsters. Three Madison County home economics advisers, **Catherine R. Mauck**, **Janet R. Burnett**, and **Linda C. Stovall**, were honored for their countywide family-care issues program.

The twelve-member DuQuoin Fair Committee, Region 9, was recognized for expanding the visibility and educational outreach of the UI Cooperative Extension Service in Southern Illinois. Team award winners included extension home economics advisers **Charlotte F. Coffey**, Perry County; **Kathryn L. Harrison**, Jackson County; **Thelma J. Malone**, Williamson County; **Deborah D. Simmons**, Johnson-Massac Counties; and **Martha J. Winter**, Randolph County.

Other team members honored were **Milly M. Kaiser**, Perry County extension youth adviser; **James M. Krejci**, area extension adviser in resource conservation and management, Region 9; **Shirley W. Martin**, acting regional director, Region 9; **F. Ray Morris**, Pope-Hardin Counties extension agriculture adviser; **David G. Palmer**, Williamson County extension youth adviser; **Michael D. Plumer**, Williamson County extension agriculture adviser; and **Patrick J. Weicherding**, area extension adviser in forestry, Region 9.

The various individual and team recipients were awarded plaques by UI Cooperative Extension Service

director **William R. Oschwald** at the 1987 CES recognition awards banquet, held November 2 in Champaign.

Robert G. Hoeft, professor and extension specialist in soil fertility, was a recipient of the 1987 *Crops and Soils* magazine Journalism Award, presented at the annual meeting of the American Society of Agronomy in early December. Hoeft co-authored an award-winning article on the effects of manure injections on corn production with **Michael A. Schmitt**, a former graduate research assistant in the UI Department of Agronomy.

Keith W. Kelley, professor of immunophysiology in the UI Department of Animal Sciences, received the 1987 Animal Management Award of the American Society of Animal Science. The award was formally presented at the 1987 ASAS annual meeting in Logan, Utah. Kelley was cited for "applying the newest techniques available to some of animal agriculture's toughest problems — those having to do with stress, immunity and infectious diseases."

L. Touby Kurtz, professor emeritus of agronomy, was formally honored December 2 with the Soil Science Distinguished Service Award of the Soil Science Society of America. The award is presented by the SSSA to selected members in recognition of their distinguished service and major career contributions to soil science.



Three Madison County extension advisers were formally recognized with the UI Cooperative Extension Service's Award for Innovative Programming at the 1987 CES state conference in November. Shown with state CES director William R. Oschwald are (l. to r.) Linda Crawl Stovall, Consumer and Homemaking Education Program (CHEP) adviser; Janet R. Burnett, home economics adviser; and Catherine R. Mauck, home economics adviser. Their award-winning program was designed to make Madison County residents aware of major family-care issues and to bring together resources to prevent or combat family-care problems. The program was launched with a successful family-care fair at Lewis and Clark Community College in September, 1986.

Faculty Awards and Honors



Extension director William R. Oschwald (far right) is shown with six extension specialists receiving awards for sustained excellence or innovative programming at the 1987 CES state conference. Standing (rear, left to right) are G. William Stone, Darrel L. Good, David W. Siebert, and Robert J. Reber. Seated are Anne H. Silvis and Thomas L. Frey. The CES awards were presented November 2 in Champaign.

Emerson D. Nafziger, associate professor and extension specialist in crop production, was recently honored with the 1988 CIBA-GEIGY Award in Agronomy for outstanding service and professional contributions in his field. The award, which included a paid trip to Europe during 1988, was formally presented at the 1987 annual meeting of the American Society of Agronomy, held in Atlanta in early December.

Marvin R. Paulsen and **Gene C. Shove**, professors of food process engineering; and **S. Gunasekaran**, former graduate research assistant in agricultural engineering, won the 1987 American Society of Agricultural Engineers (ASAE) Technical Paper Award for their paper, "A Laser Optical Method for Detecting Corn Kernel Defects."

In addition, Paulsen and Shove won a 1987 ASAE Blue Ribbon Award in the television film and motion picture category for their entry, "The Export Grain Challenge." Co-winners for this project were **Lowell D. Hill**, professor of agricultural marketing, **Barry J. Jacobsen**, professor of plant pathology extension; and OACEE communications specialists **R. Grear Kimmel** and **William H. Cresswell**.

Arthur J. Muehling, professor of farm structures extension; and **Warren D. Goetsch**, area extension adviser in agricultural engineering, also won a 1987 ASAE Blue Ribbon Award in the television film and motion picture category for their entry, "Construction of Earth Tube Heat Exchangers."

Constantin A. Rebeiz, professor of plant physiology, has recently received national media attention for his development of lethal, light-activated insecticides known as "porphyrin insecticides" because their action is rooted in the insect's porphyrin biosynthetic pathway. Rebeiz was invited to discuss the unique potential of these new insecticides at AgBIOTECH '88, a major international conference and exposition held in Washington, D. C. on January 27. Rebeiz' recent research breakthrough stems from his successful development of photodynamic or "laser" herbicides in 1984.

Jerry W. Robinson, professor and extension specialist in rural sociology, recently received two national awards for outstanding public service and distinguished professional achievements in his field. He was the first recipient of the Community Development Center's Achievement Award, recognizing his exemplary accomplishments in teaching, research, public service, and program administration. Robinson also was honored with the Rural Sociological Society's 1987 Award for Excellence in Extension and Public Service, recognizing his "application of sociological knowledge to the problems of rural America and for his innovative techniques in enabling Extension educators to teach others."

Lawrence E. Schrader, professor and head of the UI Department of Agronomy, received the 1987 Distinguished Service Award in Agriculture from Kansas State University, Manhattan, in mid-October. The award was presented by the provost of KSU at a luncheon attended by more than 100 campus officials and other dignitaries. Established in 1954, the prestigious award annually recognizes "persons whose careers have contributed notably to distinguished professional achievement or public service in or related to the profession of Agriculture."

Fay M. Sims, professor emeritus of farm management extension, was honored in September with the American Society of Farm Managers and Rural Appraisers' Silver Plow Award. Sims was cited for his 10 years of meritorious service as secretary-treasurer of the Illinois chapter. Making the award presentation at the fall meeting of the ISPFMRA East-Central Group was **Harold D. Guither**, current Illinois chapter secretary-treasurer.

William N. Thompson, professor emeritus of farm management and former director of the UI Office of International Agriculture, was recently honored by the American Society of Farm Managers and Rural Appraisers with its Distinguished Service to Agriculture Award. Thompson was cited at the national society's annual award banquet in San Antonio for his outstanding professional contributions to national and international agriculture.

Administrative Appointments

Fain Appointed Assistant Dean of Resident Instruction

Nancy C. Fain, former director of the Cooperative Education Program at Virginia Tech University, assumed the position of assistant dean of resident instruction in the College, effective with the beginning of the 1987-88 academic year. Fain has primary responsibility for student counseling and program administration in the School of Human Resources and Family Studies.

A 1971 graduate of Cheyney State University in home economics education, Fain subsequently earned her master's degree at Texas Southern University in 1973 and her Ph.D. at Oklahoma State University in 1981. Her advanced studies included work in home economics education, student personnel, counseling, and higher education administration.

Fain served as assistant director of the Cooperative Education Program at Texas Southern University for three years before assuming the directorship of the

Cooperative Education Program at Virginia Tech in 1984. She was a state planning committee member of the Virginia Identification Program (VIP), a part of the American Council on Education's national identification program for the advancement of women in higher education administration. Fain also was a Virginia representative to the National Association of Student Personnel Administrators' Region III ethnic minorities taskforce.

Fain is affiliated with several professional organizations in her field, including the American Association for Counseling and Development, the American Home Economics Association, the American Vocational Association, the Cooperative Education Association, and the National Association of Student Personnel Administrators. A member of Omicron Delta Kappa and Phi Delta Kappa honoraries, she also was recognized as an "Outstanding Young Woman in America" in 1979, 1980, and 1986.

We are pleased and proud to welcome Dr. Fair to the College of Agriculture.



An architect's rendering of the planned \$30 million Plant and Animal Biotechnology Laboratory reveals its classic Georgian-style architecture and immense size. The 170,000-square-foot building will be sited directly east of the present Animal Sciences Laboratory, at the intersection of Goodwin Avenue

and Gregory Drive. It will house more than 100 scientists and provide laboratory and support space for more than 40 major research programs in plant and animal biotechnology. (See additional drawings and information on this major building project on p. 9 and 11.)

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AgriView

College of Agriculture/University of Illinois at Urbana-Champaign

Summer, 1988

Campbell Named President of Oklahoma State University

John R. Campbell, dean of the University of Illinois College of Agriculture since 1983, has been named president of Oklahoma State University, Stillwater, Oklahoma. His appointment to OSU's top administrative post was effective July 1, 1988, according to that university's public information office.

Campbell, 55, has served as dean of the UI College of Agriculture since May, 1983, replacing former dean Orville G. Bentley at that time. He previously was associate dean and director of resident instruction for nearly six years, coming to the College from the University of Missouri-Columbia in late 1977. Campbell was a professor of dairy science at UMC.

While associate dean of the College, Campbell planned and initiated the nationally recognized Jonathan Baldwin Turner (JBT) Agricultural Merit Scholarship Program. Since its inception in 1979, the program has provided multi-year merit awards to 600 outstanding scholars pursuing agricultural or home economics curricula in the College.

During his tenure as dean, Campbell also was instrumental in obtaining construction funds for several major research and educational facilities on the Urbana-Champaign campus. Recently completed capital projects include a \$10.5 million Plant Sciences Laboratory and Greenhouses, the final component in the massive Food for Century III Program.

Other major College facilities currently under construction or soon to begin include the \$30 million Plant and Animal Biotechnology Laboratory; the \$17.5 million Animal Sciences Laboratory remodeling and addition; the \$1.8 million Imported Swine Production and Research Facility; and the \$1.4 million Agricultural Bioprocess Laboratory remodeling.

Campbell also spearheaded new research initiatives in value-added agricultural products and processes, gaining state funding support for the Illinois Center for Value-Added Agricultural Research and the UI Sponsored Research Incubator Building. In the latter "incubator" facility, six entrepreneurial firms are now working closely with UI faculty members in developing promising new agricultural products and processes.

Campbell was centrally involved in the development of the Imported Swine Genetic Research Program, which will be housed in the new Imported Swine Production and Research Facility beginning in early 1989.



John R. Campbell, new Oklahoma State University president

Here, an interdisciplinary team of UI animal researchers will incorporate the heritable, economically desirable genetic traits of Chinese pigs in commercial swine breeds.

Campbell also oversaw the recent construction of a new animal research unit at the Orr Agricultural Research and Demonstration Center in western Illinois. The new unit is expected to provide valuable research information regarding beef production and animal forage utilization.

In the planning stage is a \$5 million National Soybean Research Laboratory, where agricultural scientists would employ sophisticated genetic engineering techniques to design improved soybean varieties for specific commodity and niche markets. Research programs in the proposed NSRL also would focus on processing techniques and marketing strategies designed to expand global markets for U.S. soybeans and soy products.

In citing Campbell's outstanding qualifications for the OSU presidency, UI chancellor Morton W. Weir noted, "I've known for some time that John had the qualities needed to be a university president. It was only a matter of time until the right opportunity came along."

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(Continued on page 2)

UNIVERSITY OF ILLINOIS

"I'm delighted for him but sorry to see him go. He has been an outstanding and very successful dean of agriculture. People around the state admire and respect him. It will require someone truly exceptional to fill his shoes."

Vice-chancellor of academic affairs **Robert M. Berdahl** said, "This is a wonderful opportunity for him, obviously. John clearly has an interest in becoming a university president, and Oklahoma State University has a very strong land-grant tradition and orientation. John Campbell will be outstanding at fulfilling this mission."

Campbell has received numerous honors and recognitions for his professional achievements while at the University of Illinois. In 1987, he was honored with the American Dairy Science Association's Award of Honor, the Chicago Farmers' Distinguished Service to Agriculture Award, and the St. Louis Agri-Business Club's "Agri-Business Leader of the Year" Award. In early 1988, he was recognized by the Illinois Pork Producers Association with its Distinguished Service Award.

Campbell earlier received the prestigious International Award for Distinguished Service to Agriculture, given by Gamma Sigma Delta, the international honor society of agriculture.

In assuming the OSU presidency, Campbell follows in the footsteps of **George E. Morrow**, the College's first dean. Morrow left the College deanship in late 1894 and became president of what is now Oklahoma State University in August, 1895. The land-grant institution was then known as Oklahoma Agricultural and Mechanical College.



W. Reginald Gomes, acting dean of the College

selected as head of the department of animal sciences when the dairy science and animal science units were merged in 1985.

During his professional career, Gomes has co-edited four books and has authored or coauthored more than 100 book chapters, review articles, and papers appearing in scientific literature or presented at professional meetings. He is a member of numerous professional and honorary societies, including the American Dairy Science Association, the American Society of Animal Science, the Endocrine Society, the American Physiological Society, the Society for the Study of Reproduction, and the Council for Agricultural Science and Technology (CAST).

Gomes has served on the CAST board of directors since 1985 and is currently a member of the American Society of Animal Science physiology committee. He also was a board member of the American Dairy Association of Illinois from 1981 to 1987.

Gomes Appointed Acting Dean

W. Reginald Gomes, professor and head of the department of animal sciences, has been appointed acting dean of the UI College of Agriculture, effective August 21, 1988. He replaces current dean **John R. Campbell**, who has been named president of Oklahoma State University.

Gomes was born and raised in the San Joaquin Valley, California. He attended California Polytechnic State University, San Luis Obispo, earning his bachelor of science degree in dairy science there in 1960. Gomes subsequently completed his master's degree at Washington State University in 1962 and his doctoral degree at Purdue University in 1965. His areas of research specialization were animal reproductive physiology and endocrinology.

Gomes joined the faculty of Ohio State University and the Ohio Agricultural Research and Development Center in 1965 and was promoted to professor of dairy science there in 1972. He was a Fulbright-Hays Distinguished Traveling Professor at the College of Medicine, Zagreb University, Yugoslavia during 1974 and a guest professor in the department of animal science, Kyoto University, Japan, in 1980.

Gomes was appointed professor and head of the UI department of dairy science in 1981 and later was

Uchtmann Appointed Acting Cooperative Extension Director

Donald L. Uchtmann, professor of agricultural law and acting head of the UI Department of Agricultural Economics, has been appointed acting associate dean and director of the UI Cooperative Extension Service, effective September 1, 1988. He replaces current Cooperative Extension director **William R. Oschwald**, who will retire on August 31.

Uchtmann's new appointment was approved by the University of Illinois Board of Trustees at their July 14 board meeting. He will serve in the interim role for the 1988-89 academic year, or until a permanent Cooperative Extension director is selected.

Campbell's Comments

by John R. Campbell, Dean



This editorial represents my final opportunity to communicate with you as dean of the UI College of Agriculture and to offer a few reflections on what this remarkable experience has meant to me. As I depart to assume the presidency of Oklahoma State University, I particularly wish to review a few joint endeavors—and institutional successes—that have contributed immeasurably to my personal and professional satisfaction in this administrative role.

Since coming to the College, I have had the exceptional good fortune of working with an outstanding group of faculty and staff colleagues, students, alumni, commodity and professional organizations, legislators, government and University officials, and many others throughout the Illinois agricultural community and general citizenry.

In serving the College—and indeed all those who depend upon our far-flung food and agricultural system—I have grown *personally* and *professionally* through continuing relationships with those who share my vision of a bright future for both the College and Illinois agriculture. As I frequently have commented in the past, “*You have made a difference*” in charting the current and future directions of the College and have contributed immensely to the collective fulfillment of our land-grant mission.

With your strong input and continuing support, we have achieved numerous significant goals over the past decade:

■ The Jonathan Baldwin Turner (JBT) Agricultural Merit Scholarship Program has attained national recognition and continues to enjoy exceptionally high levels of donor support, faculty/staff involvement, and citizen and family interest. The result has been much-needed educational opportunities for 600 of the finest young scholars ever to enroll in this College.

■ The JBT Graduate Fellowship Program and Undergraduate Research/Scholarship Program, which also are privately supported, have provided valuable research and educational opportunities for agriculture’s leaders of tomorrow.

■ Our joint efforts to realize new research and educational facilities through the Food For Century III program, “Build Illinois,” and other more recent capital development initiatives have borne significant fruit. Within the next two years, for example, construction of such high-priority facilities as the Plant and Animal Biotechnology Laboratory, the Animal Sciences Laboratory Remodeling/Addition, and the Imported Swine Production and Research Facility will provide valuable new tools in the College’s ongoing efforts to build a more competitive agriculture.

■ We have moved aggressively to provide further new resources in support of the College’s land-grant

mission. New initiatives are currently underway, including plans to develop such additional facilities as the much needed National Soybean Research Laboratory.

■ With active involvement of faculty, staff, and external support groups, we have successfully implemented a number of key “value-added” programs designed to stimulate economic growth and market development for Illinois agriculture. These efforts have included establishment of the new Sponsored Research Incubator Building, an “environment of opportunity” for entrepreneurs developing high-tech agricultural products and processes, as well as the implementation of new value-added research initiatives under the state-funded Illinois Center for Value-Added Agricultural Research.

■ Other collective achievements have included the development of new programs and facilities in our statewide field research and demonstration system and the nurturing of expanded ties with regional agricultural and agribusiness groups. The *AgriView* newsletter, which currently reaches our faculty, staff, and alumni constituency throughout the nation, represents a valuable medium in communicating the College’s needs, priorities, and future directions to key audiences and support groups.

Many institutional challenges undoubtedly lie ahead for the College, including the need to improve faculty and staff compensation, to provide adequate operating funds for programs and facilities, and to build stronger College-private sector ties. I am confident that the talented team of professionals in the College will continue to join forces with our external constituency in meeting these challenges.

In his well-known poem, “The Road Not Taken,” American poet Robert Frost eloquently describes the situation of a “traveler” who comes to a point where two roads diverge—each “just as fair,” but winding off in different directions. The traveler, after carefully scrutinizing both pathways, chooses the second “less traveled” road, thus making “all the difference” in his future life.

I liken my personal situation to Frost’s traveler, moving ahead down a diverging road marked with unknown future challenges and professional opportunities. At the same time, I am very sure that those of you traveling in the current directions of the College are moving toward goals of profound significance and importance to our society.

As Eunice and I move forward in new directions at Oklahoma State University, we wish to extend our sincere thanks and appreciation for the many past opportunities to serve the citizens of Illinois and its outstanding land-grant agricultural institution. We also extend our best wishes to all those associated with the College for future personal, professional, and institutional success.

Please rest assured that we have grown and matured through many such associations of the past eleven years—and that all of you will be *fondly remembered* and *greatly missed*.

Rundquist Nominated For UI Board of Trustees Post

John F. "Jack" Rundquist, prominent UI College of Agriculture alumnus and agribusiness leader from rural Butler, Illinois, was recently nominated by the Illinois Republican Party for election to the University of Illinois Board of Trustees.

Rundquist will join fellow Republicans **Judith Reese** of Chicago and **Donald Grabowski** of Lake Forest on the statewide ballot in the upcoming November election.

Rundquist and his wife, Anita, were instrumental in establishing the College's Jonathan Baldwin Turner (JBT) Agricultural Merit Scholarship Program in 1979 and continue to be major JBT scholarship donors. The highly successful program has since provided multi-year merit scholarships to some 600 outstanding students enrolling in agricultural and home economics curricula in the College.

Anita Turner Rundquist is the great-granddaughter of Jonathan Baldwin Turner, pioneer nineteenth-century educator and champion of the land-grant concept of public higher education. Turner's efforts led to the passage of the Morrill Land-Grant Act of 1862, establishing land-grant educational institutions nationwide.

Rundquist has operated Evergreen Farms, a 1322-acre grain, beef, and swine enterprise located in Montgomery County, since 1948. He currently is president and treasurer of the family corporation, Illini Grain & Livestock, Inc.

A 1946 graduate of the University of Illinois, Rundquist earned a bachelor of science degree in agronomy. He subsequently completed his master's degree in agronomy, also at the University of Illinois, in 1947.

Rundquist is a charter member and past president of the College of Agriculture Alumni Association, serving on the association's first board of directors in 1957. He was a 1982 recipient of the Award of Merit, the Ag Alumni Association's highest honor, and also was recognized with the UI Alumni Association's Merit and Loyalty Awards.

Active in the College of Agriculture Deans Club, Rundquist also is a member of the prestigious UI Presidents Council.

Rundquist has been very active in major livestock organizations and other state and national agricultural groups. A director and past president of the Illinois Pork Producers Association, he also served as an Illinois director of the National Pork Producers Council from 1977 to 1983. Rundquist was a member of the Board of Livestock Commissioners, Illinois Department of Agriculture, from 1978 to 1985 and earlier served as director and president of the National Livestock Producers Association.

Rundquist currently is a board member and president of the Illinois Farm Development Authority; a member of the Secretary of Agriculture's advisory committee on foreign animal disease; and a member of the St. Louis Federal Reserve advisory committee.

He also is president of the Illinois Swine Progeny Testing Association and a member of the Imported Swine Genetic Research Program advisory committee.



John F. Rundquist, UI Board of Trustees nominee

The latter industry-wide group will provide oversight and guidance to UI animal researchers in introducing prolific Chinese swine to Illinois and incorporating their economically desirable genetic traits in commercial swine breeds.

In 1974, Rundquist received the prestigious Prairie Farmer "Master Farmer" Award for his outstanding achievements in production agriculture. He also was honored with the Illinois Pork Producers Association's Distinguished Service Award in 1981 and the National Swine Improvement Federation's Commercial Producers Award in 1985.

Rundquist is the second prominent College alumnus to be considered for the UI Board of Trustees post in recent decades. **Earl M. Hughes, Sr.**, Woodstock area farmer and agribusiness leader, was nominated and elected to the Board in 1957. Hughes continued as a member of the Board for the next eighteen years, also serving as its president from 1969 to 1975.

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National Soybean Research Laboratory Proposed for UIUC Campus

College and University officials have announced detailed plans to establish a National Soybean Research Laboratory (NSRL) on the Urbana-Champaign campus of the University of Illinois.

The proposed \$5 million research facility—containing approximately 40,000 net assignable square feet of laboratories, pilot plants, and support space—would be housed in the former Veterinary Medicine Building/Annex and a 5,000-square-foot new addition. Construction and remodeling costs would be borne by the federal government, with operating funds to be obtained from various public and private sources.

Planned research activities for the NSRL would emphasize genetic engineering of superior soybean varieties for specific commodity and niche markets worldwide. Related work would focus on key aspects of soybean breeding, production, processing, marketing, and product utilization.

According to College dean **John R. Campbell**, proposed NSRL research initiatives could prove extremely valuable to the domestic soybean industry in promoting increased export sales, identifying and creating lucrative niche markets, and developing new products and processes for today's highly competitive global marketplace.

"Realization of the NSRL will permit our U.S. soybean industry to better integrate genetic engineering and molecular biology techniques with other types of soybean breeding, production, processing, and marketing research. This, in turn, will help us to reduce production costs and respond more quickly to emerging market needs and opportunities.

"The NSRL will provide a national focal point for major soybean research programs, located in the very heart of the nation's soybean producing area. We will be able to draw on our considerable scientific expertise in the field and utilize the extensive collection of genetic materials already available on the UIUC campus."

The proposed facility, Campbell added, would house, maintain, and improve the U.S. soybean germplasm and genetic stocks collection, 80 percent of which is already maintained by the U.S. Department of Agriculture here at the University of Illinois.

"Genetic modification of commercial soybean varieties, using these invaluable resources, will help us "tailor" soybean varieties with improved yield, increased pest and disease resistance, and superior processing and nutritional characteristics. These are indeed key concerns in penetrating and expanding today's export markets."

The proposed NSRL project has drawn extensive bipartisan support from the Illinois Congressional delegation, Campbell said. It also has attracted the interest and support of the American Soybean Association and numerous other agricultural and commodity groups, both in Illinois and throughout the Midwest.

At the federal level, reaction to the NSRL project has been generally favorable. A feasibility study for the proposed facility was recently approved by the U.S. House of Representatives appropriations committee, along



The former UI Veterinary Medicine Building and Annex, shown above, would be remodeled to house the proposed National Soybean Research Laboratory. A 5,000-square-foot building addition would be included in the NSRL project.

with \$250,000 in planning monies. The Senate appropriations committee has approved \$50,000 for project planning; and action of a House-Senate conference committee on the proposed legislation is currently pending.

Donald A. Holt, director of the Illinois Agricultural Experiment Station, emphasized that expanded research initiatives in soybean breeding, production, processing, marketing, and utilization are vital to the U.S. soybean industry, which has seen its comparative economic advantage in the global marketplace eroded in recent years.

"Average U.S. soybean yields have increased only a modest 19 percent between 1960 and 1984 (from 24 bu/acre to 28.5 bu/acre), while those of Brazil, one of our major competitors in the world export market, have increased an impressive 64 percent (from 15.1 bu/acre to 24.7 bu/acre). During the same time period, soybean yields in all other countries increased by a total of 84 percent. These figures indicate the global availability of modern production technology, while also underlining the importance of new U.S. research initiatives relating to soybean yield, quality, and productivity.

"Increasing our production efficiency and introducing new soybean varieties tailored to specific commodity and niche markets are two keys to regaining our position of dominance in the global soybean market. In pursuing new directions in soybean technology and marketing strategies, we hope to reverse the long-term trend that has seen U.S. export sales of soybeans/soy products dwindle from 91 percent of the world total in 1970 to only 54 percent in 1987," Holt said.

"The planned work at the National Soybean Research Laboratory also would fulfill the long-held goal of our state and national soybean organizations—to undertake a comprehensive program of basic and adaptive research in soybean production, processing, marketing, and utilization. We believe that the time is definitely ripe for this broad-ranging, interdisciplinary approach, drawing on the unique advantages of genetic engineering and molecular biology to speed our research efforts.

"Clearly," Holt concluded, "the future of the U.S. soybean industry is written in genetic code."

National Faculty Development Study Completed by College Staff Members

A broad-ranging study of national faculty development needs, priorities, and proposed program initiatives in U.S. colleges of agriculture was recently completed by three current or former staff members in the College. Results of this research are now available in two complementary resource publications—**National Assessment of Faculty Development Needs in Colleges of Agriculture**; and **Faculty Development Programs—A Literature Review**.

Authors of the new resource study, which was completed under a five-year research grant from the Higher Education Programs/Cooperative State Research Service, U.S. Department of Agriculture, were **William L. George**, associate dean and director of resident instruction; **Coby B. Simerly**, former assistant dean of resident instruction for home economics programs; and **Leszek Z. Chudzinski**, research associate. Simerly currently is associate director of research and sponsored programs at the University of Nebraska-Lincoln.

The \$60,000 supporting USDA research grant for the study was originally awarded to then associate dean **John R. Campbell** in late 1982. The project's overall objective was to investigate possible faculty development initiatives for instructional enhancement, involving both private industry and the academic community.

A blue-ribbon task force representing business, industry, state and federal government, and agricultural institutions throughout the nation recommended a comprehensive needs assessment in early 1983. Survey data and supporting information were collected, reflecting faculty views on existing faculty development programs, current or proposed development strategies, and projected future needs in this area. Statistical information was provided by more than 500 agricultural faculty members, representing both land-grant and AASCARR (American Association of State Colleges of Agriculture and Renewable Resources) educational institutions nationwide.

In addition to exploring internal faculty development needs and initiatives, the study also focused on possible university-private sector relationships designed to promote faculty development. Possible strategies that were considered in the study included developing industry/educational institution consortia and promoting faculty exchanges with external organizations.

Findings summarized in the two publications indicate that faculty development programs in U.S. agricultural institutions are still largely in their infancy, with comprehensive program efforts needed to meet agriculture's growing scientific, technological, and human resources needs. Calling faculty members "an essential resource component in our agricultural education system," the study urged "greater attention to faculty development, renewal, and redirection" in the related areas of teaching and research.

Most of the agricultural faculty members surveyed in the study demonstrated a high interest in professional development and instructional enhancement, a desire to broaden their areas of scientific and technical expertise,

and a need to establish/foster closer relationships with their professional peers in business, industry, government, and other educational institutions.

Limitations revealed in the study included lack of released time and financial support for specific faculty development activities. Survey respondents also noted the lack of coordinated faculty development initiatives at many educational institutions and the limited number of faculty exchange programs with the private-sector organizations.

Many of those surveyed believed that teaching, unlike research, is not adequately evaluated and rewarded. Nearly half of the survey respondents (45%) considered teaching less important than research activities, although the percentage was significantly higher among faculty at land-grant agricultural institutions than among their AASCARR peers. Eighty percent of the 514 individuals providing survey data supported the view that teaching and research should count equally toward faculty promotion and tenure.

Although the vast majority (80%) of those surveyed regarded all forms of teaching preparation as "helpful" or "very helpful," more than one-third (37%) felt that they were not adequately prepared to teach at the time of their first academic appointment. A consensus recommendation was that expanded faculty development opportunities, supportive administrative policies, and an environment conducive to professional growth are needed throughout the nation's agricultural institutions. This type of support, the survey results suggested, would be particularly beneficial to entry-level and junior faculty members.

(continued on page 7)



Pioneering research by Cyril G. Hopkins, head of the UI Department of Agronomy from 1900 to 1919, paved the way for later work in soil fertility, soil surveying, and chemical analysis of corn.

One of the resource publications, **Faculty Development Programs—A Literature Review**, gives information about the Foundation Center and lists government agencies and private foundations that have potential to provide funding support for faculty development programs.

Copies of the two new resource publications—**National Assessment of Faculty Development Needs in Colleges of Agriculture** and **Faculty Development Programs—A Literature Review**—are now available at a cost of \$5.00 each from Vocational Agriculture Service, University of Illinois at Urbana-Champaign, 1401 S. Maryland Drive, Urbana, Illinois 61801. (Checks should be made payable to the University of Illinois; the publication cost of \$5.00 per title includes postage and handling charges.)

Illinois Agricultural Experiment Station Celebrates "A Century of Progress"

The following remarks were prepared by Donald A. Holt, director of the Illinois Agricultural Experiment Station, on the occasion of the Station's centennial celebration, March 21, 1988. A portion of this text also appears in the centennial issue of the Station's quarterly publication, Illinois Research.

In what has truly been "a century of progress," the Illinois Agricultural Experiment Station has emerged as a diversified research organization that plays many key roles in Illinois, U.S., and world agriculture.

As an administrative unit of the University of Illinois College of Agriculture, the Station is responsible for planning, conducting, and administering a broad program of basic and applied research. At the same time, it is responsible for training all agricultural graduate students and many undergraduate students in the history, philosophy, and methods of research.

The Station also is the primary research and development arm of production agriculture in this state—responsible for generating practical information with which farmers can manage profitable, resource-conserving, environmentally safe farming systems.

Additionally, as few in the general public realize, the Station includes among its activities the research programs in home economics. For example, an entire building on the Urbana-Champaign campus houses child development research. In it, scientists are exploring some of the most fascinating and basic phenomena in nature, including how children develop the ability to reason symbolically. Research addressing the most fundamental needs of the human race—the nurture of crops, animals, and families; and the provision of food, clothing, and shelter—is a major responsibility of the Station.

The Station deals with agriculture in the widest sense of the word. Its clients, originally just the state's farmers, now include the scientists' peers around the

world, governments, industries, businesses, foundations, commodity groups, agricultural organizations, environmentalists, conservationists, and, perhaps most importantly, the consumers of agricultural products.

Many of these groups provide money that sustains the programs of the Station. That annual support has grown from \$15 thousand in 1888 to \$25 million in 1986, increasing from \$20 to \$25 million over the last three years.

In reflecting on the Station's centennial, I have asked myself, "What concerns were present when the Station was created that are still germane and probably will be 100 years hence?" During the current financial difficulties in agriculture, I continually emphasize the need for U.S. agriculture to become more competitive and to seek aggressively to recapture the large share of world markets for agricultural products it has had in the past. The key to achieving this economic goal is through better programs of production, processing, marketing, and utilization research.

I believe that such competition would be good for the people of the world, because it would stimulate all agriculture to become more efficient and productive, thus increasing the supply and quality and reducing the cost of agricultural products to the consuming public.

Much to my surprise, I found that William Hatch, writing in 1885 in support of the historic legislation that bears his name, expressed the same concern, as follows: "It is becoming apparent from year to year that the United States have not the undisputed monopoly as the producers of cereals. For many years, owing to the newness and richness of our soils, we had a decided advantage over our competitors, much of which was due to advantages in transportation as well as ease and cheapness of production. . . . The same is true of meat and other agricultural products. While this competition is sharp, and becoming more so, it would seem that every encouragement consistent with economy derived from science and experiment should be given in aid of this great industry. The object should be to increase production at a decreased cost and at the same time to preserve the fertility of our soils."

Despite the challenges we face, I am grateful for the circumstances that permit me to speak for the Illinois Station as it passes its 100th year. In my opinion, no legislative act other than the adoption of the U.S. Constitution has had a greater and more positive effect on this nation than the passage of the Hatch Act, which created the State Agricultural Experiment Station System.

The real wisdom of our forefathers was not so much in creating the experiment stations as it was in placing the stations in land-grant universities and in adding the Cooperative Extension Service to that unique institutional structure. Other nations have agricultural colleges, experiment stations, and extension services. Alone, each institution may provide limited benefit. Together, they form an enormously effective and productive research and development system.

To the extent that this unique institutional structure is nurtured by its many clients and beneficiaries and well managed by its faculty and staff, it will continue to make major contributions to society.

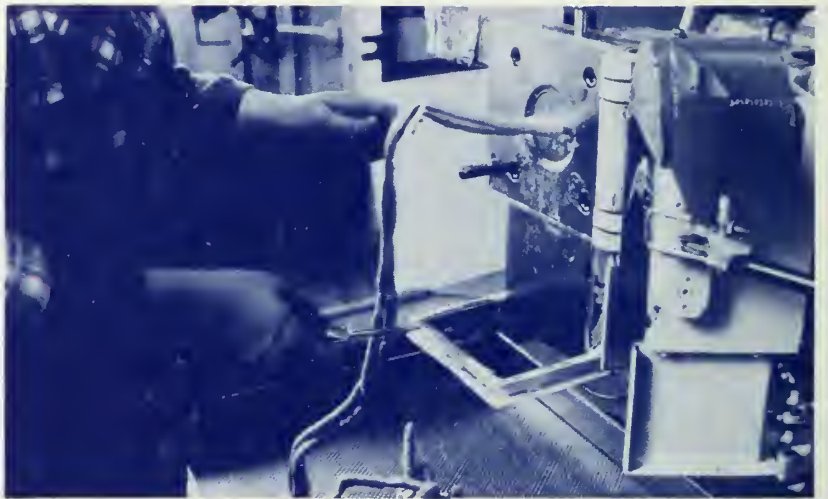
**A Century of Progress:
The Illinois Agricultural
Experiment Station, 1888-1988**



*Improving
Livestock
and
Meats*



*Developing
New Agricultural
Products
and
Expanded
Markets*



—Adapted from an IAES centennial display by Ted Odenweller



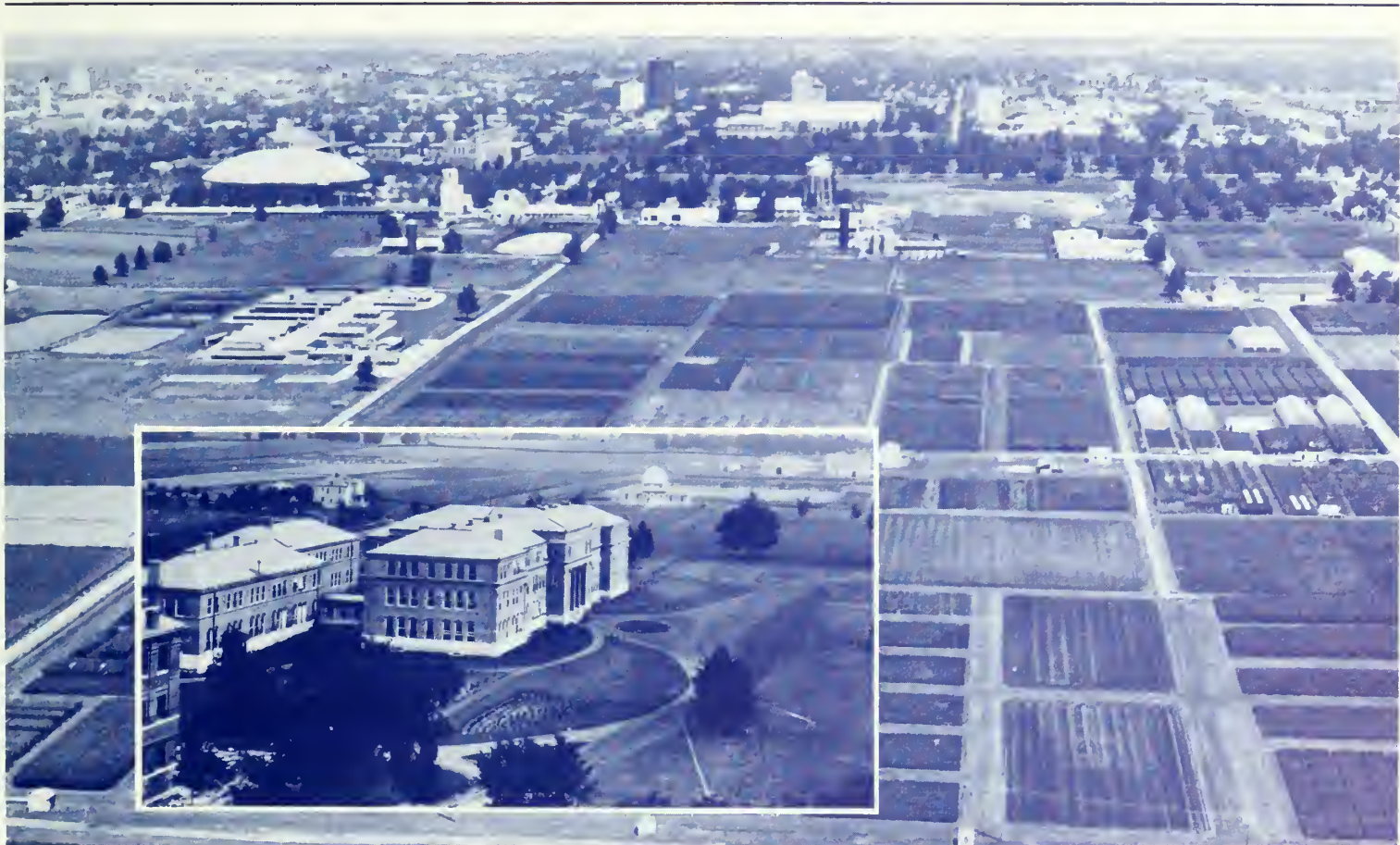
Developing More Efficient Home Environments



*Increasing
Agricultural
Production
Efficiency*



*Improving
Field, Forest,
and Horticultural
Crops*



Expanding the College's Research and Teaching Capability: Then and Now

Faculty Research Grants

The following research grants have been awarded to faculty members of the UIUC College of Agriculture for start-up dates from November 1, 1987 through July 1, 1988. Parenthesized information indicates the awarding agency or organization, the total dollar amount of the research grant, and its duration.

Leslie L. Christianson, Department of Agricultural Engineering, "Building Research: Room Air and Air Contaminant Distribution" (*National Science Foundation*, \$39,488, 11/1/87 to 9/30/88).

Catherine E. Eastman, Office of Agricultural Entomology, "Feeding Behavior of the Leaf Hopper Circulifer and its Role in Transmission of a Phytopathogenic Spiroplasma" (*Whitehall Foundation, Inc.*, \$73,400, 1/1/88 to 12/31/90).

Lowell D. Hill and R. Gear Kimmel, Department of Agricultural Economics, "Let's Meet the Competition" (*American Soybean Association*, \$31,600, 1/1/88 to 12/31/89).

Gerald L. Riskowski, John F. Reid, and Richard C. Coddington, Department of Agricultural Engineering, "Developing Computer Programs to Design and Optimize Cold Formed Steel Structure" (*American Iron and Steel Institute*, \$60,188, 1/1/88 to 12/31/89).

David E. Harry, Department of Forestry, "Characterizing ADH Genes and Genomic Clones in Monterrey Pine" (*USDA/Forestry Service*, \$68,073, 1/14/88 to 3/31/89).

Anthony D. Pugel, Department of Forestry, "Composite Panel Behavior Under Changing Environments" (*USDA/Forestry Service*, \$32,560, 1/15/88 to 9/30/89).

Roscoe L. Pershing, Department of Agricultural Engineering, "Pesticide Accumulation Evaluation Under Long-Term Tillage Systems" (*USDA/Agricultural Research Service*, \$21,267, 4/13/88 to 3/31/89).

Thomas J. Bicki and Allan S. Felsot, Department of Agronomy, "Influence of Tillage System and Water Management Practices on Leaching of Alachlor Cyanazine, and Carbofuran in Sandy Soil" (*North Central Region Pesticide Impact Assessment Program*, \$16,000, 4/29/88 to 4/30/89).

Ellery L. Knake, Department of Agronomy, "Degradation, Persistence, and Environmental Fate of Imazaquin, Chlorimuron-Ethyl, AC-263,499, and FMC 57020 and their Effects on Subsequent Crops . . ." (*North Central Region Pesticide Impact Assessment Program*, \$19,000, 4/29/88 to 4/30/89).

Richard A. Weinzierl, Office of Agricultural Entomology, "A Two-Year Evaluation of Protectant Insecticides for Stored Grain: Residue Levels, Efficacy, and Benefits to Grain Grade and Economic Value" (*North Central Region Pesticide Impact Assessment Program*, \$13,890, 4/29/88 to 4/30/89).

Ivan J. Jansen, Robert E. Dunker, and William M. Walker, Department of Agronomy, "Prime Farmland Reclamation After Surface Mining" (*USDA/Cooperative States Research Service*, \$284,000, 5/15/88 to 5/31/91).

Michael C. Hirschi, Department of Agricultural Engineering, "A Comparison of Watershed Sedimentology Model for Use in Evaluation of Cost-Share Conserva-

tion Practice Benefits" (*Water Resources Council*, \$24,890, 5/21/88 to 5/20/90).

Peter J. Bechtel, Ricardo Villota, Floyd K. McKeith, and Jan E. Novakofski, Department of Animal Sciences, "New Concept: Extruded Pork Products" (*Illinois Pork Producers Association*, \$10,000, 6/1/88 to 5/31/89).

Marcos M. Kogan, David W. Onstad, and C. G. Helm, Office of Agricultural Entomology, "Introduction of Broadleaf Weeds with Soybeans as Affected by Herbivory: A Model for Multiple Pest Interactions" (*USDA/Cooperative States Research Service*, \$74,591, 6/1/88 to 5/31/90).

Alan K. Kriz, Department of Agronomy, "Analysis of Gene Expression in Developing Maize Embryos" (*USDA*, \$370,795, 6/21/88 to 6/20/91).

Jack D. Paxton, R. G. Powell, and G. F. Spencer, Department of Plant Pathology, "Phytoalexin Elicitation, Production, and Purification" (*Agricultural Research and Development Corporation*, \$553,284, 7/1/88 to 6/30/91).

Munir Cheryan, Department of Food Science, "Enzymatic Modification and Fractionation of Corn Protein" (*Illinois Corn Marketing Board*, \$173,021, 7/1/88 to 6/30/91).

Jerry D. Pepple, Vocational Agriculture Service, "A Statewide Occupational Employment Study in Agriculture" (*Illinois State Board of Education/DAVTE*, \$50,000, 7/1/88 to 6/30/89).

Dale A. Law, Office of Agricultural Education, "Agricultural Core Curriculum Revision" (*Illinois State Board of Education/DAVTE*, \$135,000, 7/1/88 to 6/30/89).



Shown is an architect's rendering of the planned Animal Sciences Laboratory (ASL) addition, a five-story, 61,000-square-foot structure to be located at the south side of the existing ASL. A \$17.5 million project to remodel the ASL and construct the addition is scheduled to begin later this year. The combined facility, containing 144,000 gross square feet of space, will include research and instructional laboratories, classrooms, faculty and administrative offices, and support areas for the UI Department of Animal Sciences.

Ag Construction Update '88

The relative calm and tranquility of summer on the Urbana-Champaign campus will soon be interrupted by the bustle of construction activities as several College building projects move into high gear.

Architectural reviews for the \$30 million Plant and Animal Biotechnology Laboratory (PABL) and the \$17.5 million Animal Sciences Laboratory (ASL) remodeling and addition are now nearing completion. Gilbane Building Company, Chicago, has recently been employed as construction manager for the PABL project, which will be built with federal funds. The State of Illinois Capital Development Board will oversee construction of the ASL.

Because the two buildings will be physically linked and will share a common utilities infrastructure, joint bids will be sought for the early phases of both capital projects in early August. Contracts for excavation, utilities, and site preparation work are expected to be awarded by mid-September, with actual work on the combined projects slated to begin about October 1.

All remaining construction bids for the PABL and ASL will be sought separately beginning in early September, with contracts to be awarded by early to mid-October. An official ground-breaking ceremony for the PABL also is scheduled for September 17.

Under the current construction schedule, target completion date for both projects has been set for December, 1990.

Site preparation work and road improvements in areas adjacent to the two construction projects have already begun. Goodwin Avenue has been permanently closed south of Gregory Drive; and the planned Dorner Drive relocation between Gregory Drive and Pennsylvania Avenue is now underway. This latter project is expected to be completed by mid-August.

According to Illinois Agricultural Experiment Station planning engineer **Douglas B. Bauling**, the longtime UI Motor Pool southwest of Turner Hall has now been vacated. College faculty and staff members currently parking vehicles in the PABL/ASL construction area (Lot F-4) will be reassigned to new lot spaces in the former Motor Pool location as soon as lot improvements are completed there. Parking reassignments are expected to be made by mid-August.

Several other capital projects that will greatly expand the College's research and teaching capability are moving ahead on schedule. The early phases of the \$1.84 million Imported Swine Production and Research Facility are now completed and the structure is expected to be ready for use by the end of the year.

The new swine research complex will house pigs imported from the People's Republic of China next year. It will incorporate an experimental solar pond for heating and a lagoon having water-recycling capabilities. In an economy move, the chain-link fencing from around the former UI Motor Pool will be erected around the perimeter of the new South Farms facility.

Remodeling of the Agricultural Bioprocess Laboratory (ABL) is moving forward rapidly, with a target completion date of October, 1988. The basement level



Al Nelson, INTSOY utilization research leader, examines a continuous operation extruder/expeller system currently being developed to process high-quality soybean oil and meal from raw soybeans. This and other value-added research with soybeans will be housed in the basement level of the Agricultural Bioprocess Laboratory upon completion of a \$1.4 million remodeling project in October, 1988.

of the remodeled ABL (formerly known as the Dairy Manufactures Building) will provide laboratory and support space for processing and utilization research by International Soybean Program (INTSOY) staff.

The first floor of the ABL also is being remodeled for use by the Department of Food Science in bioprocessing research, with emphasis on the development of new, more efficient processing techniques and value-added agricultural products.

Each of the two floors will provide approximately 4,000 net assignable square feet of space, including wet laboratories and pilot plant areas.

A new 9,000-square-foot warehouse building has been constructed in the South Farms area in conjunction with the UIUC Office of Space Utilization. The pole-type structure will provide space for storage of paper and printing supplies by the College's Agricultural Services unit.

Work is currently ongoing to prepare the greenhouse ranges in the new \$10.5 million Plant Sciences Laboratory for research use. Heating and ventilating systems are now fully operational and soil is being placed in the greenhouse soil beds.

Construction of new facilities for animal housing, feeding, and storage has now been completed at the Orr Agricultural Research and Demonstration Center's animal research unit, located in Pike County. Start-up and operating funds are currently being sought from the Illinois General Assembly for beef production and forage utilization research at the new unit.

AgriView

Faculty Awards and Honors

John D. Alexander, associate professor emeritus of agronomy, has been named president-elect of the Illinois Soil Classifiers Association.

Four academic professional employees of the UI College of Agriculture were formerly honored March 22 with the newly established Academic Professional Award for Excellence.

The 1988 awardees included **Douglas B. Bauling**, planning engineer and assistant to the director of the Illinois Agricultural Experiment Station; **Lester V. Boone**, agronomist and coordinator of the College's statewide agronomic field research system; **Christine A. Jackson**, director of the College's Office of Budget and Resource Planning; and **R. Grear Kimmel**, leader of the audio-visual/video unit in the Office of Agricultural Communications and Extension Education.

Bauling and Boone were cited for "sustained excellence and exceptional dedication," while Jackson and Kimmel were recognized for "exceptional innovation and creativity." Each received a certificate of recognition and a \$500 recurring annual salary increment.

Three distinguished faculty members of the UI College of Agriculture were formally honored March 22 with the Paul A. Funk Recognition Award, the College's highest professional honor.

Funk Award winners for 1988 included **Peter J. Bechtel**, professor of muscle biology and meat science; **Harold D. Guither**, professor of agricultural policy extension; and **Mary Frances Picciano**, professor of nutrition.

The prestigious award is annually given by the Paul A. Funk Foundation of Bloomington, Illinois in recognition of outstanding professional achievements and major contributions to the betterment of agriculture through research, teaching, extension, and public service.

Each Funk Award winner received a certificate of recognition, an unrestricted award of \$2,000, and a \$1,000 recurring annual salary increment. In addition, the sum of \$1,000 was presented to the respective academic departments of the awardees to support their future programs and professional activities.

Making the award presentations at the 1988 UI College of Agriculture recognition awards banquet were **John R. Campbell**, dean of the College; and **Eugene D. Funk, Jr.**, representing the Paul A. Funk Foundation.

The Illinois Association of Extension Advisers, Youth (IAEA-Y) recently honored several Cooperative Extension youth advisers and state specialists for outstanding achievement in programs and service. The awards were presented at the IAEA-Y spring meeting, held May 12-13 in Peoria.

Receiving the 1988 IAEA-Y Outstanding Program Award was **Judy Bingman**, White County. Winners of the association's New Adviser Award were **Cheryl Metzger**, Knox County; **Jeff Macomber**, Boone County; and **LaDean Goodwin**, Crawford County.

Those receiving IAEA-Y Public Information Awards for 1988 included **Marilyn Norman**, Cook County (video-cassette program and educational leaflet); **Sharon Kaylor**, Hancock County (educational leaflet); **Steven Wagoner**, Logan County (radio and television program); **Judy Bingman**, White County (state association newsletter); **Pamela Jacobs**, Monroe County, (newsletter and direct mail piece); **Debra Stocker**, Clinton County (newsletter); **Rose Myers-Bradley** and **Don Frederick**, Cumberland County (news photo); and **Joan Pluester**, Scott County (news story).

Steven Wagoner, Logan County, received the IAEA-Y Achievement-in-Service Award for youth advisers with four to seven years of professional service. **G. William Stone**, longtime state 4-H/youth specialist, won the American Spirit Award.

Two youth advisers—**Margaret Severinson-Godke**, Warren County; and **Debra Stocker**, Clinton County—were formally honored with the 1988 IAEA-Y Distinguished Service Award and will receive national recognition at the upcoming National Association of Extension 4-H Agents annual meeting. Receiving Twenty-Five Year Service Recognition Awards were **David Pyle**, assistant state Cooperative Extension director, 4-H/youth; and **Gerald Gast**, state 4-H/youth specialist.

Charles M. Brown, professor of small grain breeding and associate head of the UI Department of Agronomy, has been named an honorary life member of the Illinois Seed Dealers Association. In receiving the honor, Brown was recognized for more than 30 years of outstanding service and significant professional contributions to the Illinois seed industry.



Paul A. Funk Recognition Award recipients for 1988 included (left to right) **Harold D. Guither**, **Peter J. Bechtel**, and **Mary Frances Picciano**. Also participating in the March 22 awards ceremony was (far right) **Eugene D. Funk, Jr.**, representing the Paul E. Funk Foundation of Bloomington, Illinois.

Faculty Awards and Honors

John R. Campbell, professor of animal sciences and dean of the UI College of Agriculture, was honored in February with the Illinois Pork Producers Association's 1988 Distinguished Service Award.

Campbell was cited for his outstanding contributions and distinguished service to the Illinois pork industry. He was a key figure in the importation of Chinese swine from the People's Republic of China and in establishing an Imported Swine Genetic Research Program at the University of Illinois to improve the profitability of the state's commercial swine operations.

G. Richard Carlisle, professor emeritus of animal science extension, was formally honored March 4 with the National Pork Producers Council's Distinguished Service Award. The prestigious award, recognizing Carlisle's outstanding service and career contributions to the pork industry, was presented at the 1988 National Pork Industry Forum in Nashville, Tennessee.

Carlisle served for 22 years as an extension livestock specialist at the University of Illinois and is widely known for his work in swine improvement and live hog evaluation. He also helped popularize the Illinois corn-soy swine ration and pioneered the development and use of confinement swine production systems in Illinois and the midwest. He was recognized in 1975 with the UI College of Agriculture's highest professional honor, the Paul A. Funk Recognition Award.

Several home economics faculty members were recently recognized by student organizations in their respective program divisions with "Outstanding Instructor" or "Outstanding Advisor" Awards for the 1987-88 academic year.

Those recognized as an "Outstanding Instructor," and the respective student organization making the award, were: **Allison M. Carll-White**, assistant professor of interior design, student branch of the American Society of Interior Design (ASID); **Jeanne L. Hafstrom**, associate professor of family and consumer economics, Family and Consumer Economics Club (FACE); **Donald K. Layman**, associate professor of nutrition, Foods and Nutrition Club/Hospitality Management Association (FN/HMA); **Annabelle Slocum**, visiting assistant professor of home economics education, Home Economics Education Student Seminar (HEESS); **Judy S. DeLoache**, associate professor of child development, Human Development and Family Ecology Club (HDFE); and **Michelle Morganosky**, assistant professor of apparel marketing, Textiles and Apparel Group (TAG).

Those honored as an "Outstanding Advisor" for 1987-88, and the respective student organizations making the award were: **Allison M. Carll-White**, assistant professor of interior design, ASID; **Vicki R. Fitzsimmons**, assistant professor of consumer economics, FACE; **Kathryn S. Keim**, assistant professor of community nutrition, FN/HMA; **Mildred B. Griggs**, professor of home economics education, HEESS; and **Sara**

U. Douglas, assistant professor of textiles and apparel, TAG.

The various faculty award winners were formally recognized at the College's All-Ag Banquet.

Two College faculty members were recently honored by the U.S. Department of Agriculture for outstanding service and exemplary professional achievement.

David L. Chicoine, professor of taxation and public finance policy, received the 1988 USDA Superior Service Award in the category of education and information. Chicoine, who is also an Extension economist and a faculty member of the Institute of Government and Public Affairs, was cited for his dynamic program leadership in the areas of local government taxation, finance, and farmland tax assessment policy. Chicoine also is a recognized authority on rural roads and bridges.

James B. Sinclair, professor of plant pathology, received the 1988 USDA Distinguished Service Award in research for his pioneering work on soybean diseases and their control. A recognized world authority in his field, Sinclair also was cited for developing an extensive international soybean pathology network and contributing to the research of students and professional soybean workers in the U.S. and abroad.

Chicoine and Sinclair were formally recognized at the 1988 USDA honor awards ceremony, held June 22 in Washington, D.C.

Richard C. Coddington, associate professor of power and machinery, won the 1987-88 Teaching Excellence Award, presented by the Department of Agricultural Engineering. The award recognizes outstanding teaching performance among departmental faculty members who have taught at the undergraduate level for at least four semesters and who hold the rank of instructor or above.

Robert E. Wolf also received the 1987-88 Teaching Excellence Award for graduate teaching assistants in the department.

Brenda J. Cude, associate professor of family economics extension, has been elected to the board of directors of the American Council on Consumer Interests.

Richard L. Farnsworth, assistant professor and Extension specialist in natural resource economics, has received a Certificate of Appreciation from the Soil Conservation Service. The award recognizes his dynamic leadership in developing a national workshop program for the SCS to teach agricultural producers how to formulate their own soil conservation plans.

The educational materials, including an instructor's manual and coordinated audio-visuals, are currently being distributed to national and regional program leaders in the Cooperative Extension Service and SCS.

The award was presented to Farnsworth by John J. Eckes, state director of the SCS.

Faculty Awards and Honors

Vicki R. Fitzsimmons, assistant professor of consumer economics, has been elected vice-chair of the research section, American Home Economics Association, for 1988-90.

Richard M. Forbes, professor emeritus of animal science, was installed as a Fellow of the American Institute of Nutrition at the AIN annual meeting in May. Forbes was recognized for his distinguished career contributions and outstanding service to nutritional science.

Robert W. Frank, Extension agriculture adviser for Jackson County, was honored April 13 with the American Forage and Grassland Council's Merit Certificate. The prestigious award, which recognizes Frank's outstanding educational programs and professional contributions to forage crops and livestock production systems in Illinois, was presented at the Council's annual conference in Baton Rouge, Louisiana.

Frank, who is a charter member of the Illinois Forage and Grassland Council and its 1981 state president, is one of only two Extension workers who have received the national award.

Mary M. Hoffman, associate professor of extension and regional director of Illinois Extension Region 1, has been elected secretary-treasurer of the international section of the American Home Economics Association.

Six outstanding faculty members of the UI College of Agriculture were recognized March 22 with the College's Faculty Award for Excellence. A Senior Faculty Award and Young Faculty Award were presented for "outstanding professional achievement and demonstrated excellence" in each of the three categories of extension, research, and teaching.

The 1988 award recipients included **Gilbert R. Hollis**, professor of swine extension (Senior Faculty Award in Extension); **Floyd K. McKeith**, associate professor of meat science (Junior Faculty Award in Extension); **Jack M. Widholm**, professor of plant physiology and genetic engineering (Senior Faculty Award in Research); **Steven T. Sonka**, professor of farm management and production economics (Young Faculty Award in Research); **William R. Nelson, Jr.**, professor of landscape design extension (Senior Faculty Award in Teaching); and **Robert M. Skirvin**, associate professor of horticulture (Young Faculty Award in Teaching).

Each received a certificate of recognition and a \$1,000 recurring annual salary increment. The awards were formally presented by College dean **John R. Campbell**, at the college's annual awards banquet.

Ivan J. Jansen, professor of pedology, was one of ten UI faculty members recently elected a Fellow of the prestigious American Association for the Advancement of Science. The recognition for outstanding professional achievements and significant contributions to science was presented at the AAAS 1988 annual meeting in Boston.



Six College of Agriculture faculty members received 1988 Faculty Awards for Excellence, recognizing outstanding professional achievements in extension, research, and teaching. Shown at the March 22 presentation in the Illini Union were awardees (left to right) Floyd K. McKeith, William R. Nelson, Jr., Gilbert R. Hollis, Steven T. Sonka, Robert M. Skirvin, and Jack M. Widholm.

Barbara P. Klein, professor of foods and nutrition, was recently honored with the 1988 Borden Award, sponsored by the Borden Foundation, Inc., and the American Home Economics Association (AHEA). The prestigious award, recognizing outstanding research achievements in the areas of nutrition and/or experimental foods, was presented June 22 at the 1988 AHEA annual meeting in Baltimore, Maryland.

Klein was cited for her pioneering research with polyphenols, natural antioxidants which are present in all plants and control the enzymes causing undesirable changes in unprocessed fruits and vegetables. She also received a gold medallion and a prize of \$2,000.

Sharon L. Knight, assistant professor of controlled environment crop production; and **Gerald C. Nelson**, assistant professor of international trade policy, have been named Lilly Endowment Teaching Fellows for 1988-89. The Lilly fellowship grants support selected UI faculty who are in their second to fifth year of teaching, enabling them to devote additional time to instructional development and/or research on teaching.

Each Lilly Fellow received released time from their academic responsibilities and up to \$650 for supplies and equipment to support their teaching research project. In addition, the respective academic departments of each recipient are awarded \$6,000 to support their work.

Fellows are chosen on the basis of excellence in teaching and scholarship, plans to design or redesign an undergraduate course, and commitment to the teacher/scholar role model. Each works closely with a senior professor who serves as a mentor in conducting the instructional research project. Knight's mentor is **L. Arthur Spomer**, professor of plant physiology; Nelson's mentor is **Wesley D. Seitz**, professor of natural resource economics.

Faculty Awards and Honors

The UI Department of Animal Sciences recognized several of its faculty members for outstanding professional achievement at the department's 1988 awards banquet.

Laurie M. Lawrence, associate professor of horse science, won the D. E. Becker Award for Excellence in Undergraduate Teaching and Counseling. **Douglas F. Parrett**, associate professor of meat animal evaluation, received the G. R. Carlisle Award for Excellence in Extension Teaching and Research. **Peter J. Bechtel**, professor of muscle biology and meat science, was honored with the H. H. Mitchell Award for Excellence in Graduate Teaching and Research.

Among additional departmental recognitions, doctoral student **Kevin C. DeHaan** won the A. L. Neumann Outstanding Graduate Student Award.

Marshal D. McGlamery, professor of weed science extension, was a recipient of the 1988 UIUC Excellence in Off-Campus Teaching Award. He was one of nine UIUC faculty members honored for teaching innovation and professional excellence at the campus instructional awards presentation on May 5.

McGlamery received a personal award of \$1,000. An additional sum of \$500 was presented to his academic department, the Department of Agronomy, for enhancing and improving off-campus instructional programs. The campuswide award was presented by **Robert M. Berdahl**, UIUC vice-chancellor for academic affairs.

Among additional honors, McGlamery was elected a Fellow of the Weed Science Society of America at the 1988 WSSA annual meeting in February. McGlamery was cited by the WSSA for his outstanding professional achievements and career contributions to weed science.

Darrell A. Miller, professor of plant breeding and genetics, was honored March 22 with the College's newly established John Clyde and Henrietta Downey Spitler Teaching Award. The award recognizes exemplary performance and innovation in the broad area of teaching.

The Spitler Award was established by **Mildred Spitler Johnson** of Urbana, Illinois in memory of her parents. **John Clyde Spitler** was a longtime Extension worker and administrator who served as assistant and associate director of the UI Cooperative Extension Service from 1937 until his retirement in 1949.

Miller received an unrestricted personal award of \$500 and a certificate of recognition.

John J. Nicholaides, III, associate dean of the College and director of the UI Office of International Agriculture, has been appointed chairman of the Joint Committee for Agricultural Research and Development (JCARD). The committee is the operational-level body of the Board for International Food and Agricultural Development, U.S. Agency for International Development. Nicholaides, who was JCARD vice-chairman in 1987-88, will serve as JCARD chairman through June 30, 1989.



College dean **John R. Campbell** (left) and associate dean emeritus **Karl E. Gardner** (far right) congratulate **Darrell A. Miller** (2nd from left), professor of agronomy, and **Warren K. Wessels**, assistant dean of resident instruction, who were the first recipients of the newly established Karl E. Gardner Outstanding Undergraduate Adviser Award. Miller also was honored as the first recipient of the John Clyde and Henrietta Downey Spitler Teaching Award.

James R. Roush, professor of agricultural marketing, was recently honored as the "Outstanding Instructor" in both the Department of Agricultural Economics and the UI College of Agriculture for 1988. The two awards for teaching excellence, active involvement in campus organizations, and positive impact on students were presented at the College's All-Ag Banquet on April 29.

Sonya B. Salamon, professor of family relationships, has been named an Ameritech Research Fellow for 1988-89 by the UI Institute for Government and Public Affairs. Under an IGPA grant, Salamon will conduct a study of "Corn Belt Community Responses to the Restructured Agricultural Economy."

L. Frederick Welch, professor of soil fertility, was honored April 23 with the Field and Furrow Club's 1987-88 "Outstanding Instructor" Award. The award recognizes outstanding undergraduate instruction in agronomy.

Warren K. Wessels, assistant dean of resident instruction; and **Darrell A. Miller**, professor of plant breeding and genetics, were co-winners of the 1988 Karl E. Gardner Outstanding Undergraduate Adviser Award.

The award, which recognizes excellence in undergraduate advising and counseling in the College, includes a certificate of recognition and an unrestricted personal award of \$1,000. It was established this year by the Bunn-O-Matic Corporation of Springfield, Illinois to honor associate dean emeritus **Karl E. Gardner** for his dedication, service, and concern for undergraduate students.

Administrative Appointments

Chicoine to Head Agricultural Economics Department

David L. Chicoine, Extension agricultural economist and professor of taxation and public finance policy, has been named head of the UI Department of Agricultural Economics, effective with the beginning of the 1988-89 academic year. His appointment was approved by the UI Board of Trustees at their May meeting.

Chicoine, who also holds a faculty appointment in the Institute of Government and Public Affairs, replaces acting department head **Donald L. Uchtmann** in his new administrative role.

Chicoine is a nationally recognized authority in state and local public finance policy. Since joining the UI agricultural economics faculty in 1979, he has conducted a number of highly successful research and extension programs in the areas of farmland property tax assessment, fiscal and organizational aspects of rural local government, and financing of rural roads and bridges. Chicoine provided leadership in developing a new Illinois farmland assessment law in 1981 and has served on the Illinois Department of Revenue's farmland assessment technical advisory board for the past eight years.

Chicoine recently participated in a statewide project with the Illinois Tax Foundation to analyze the organization and performance of the real property tax assessment system in Illinois. He also has assisted the U.S. Office of Transportation in evaluating the distribution of federal highway funds for rural low-volume roads.

A native of Elk Point, South Dakota, Chicoine completed his bachelor of science degree at South Dakota State University in 1969 and his master's degree at the University of Delaware in 1971, both in agricultural economics. He earned his doctorate in agricultural economics at the University of Illinois in 1979.

McNamara Appointed Assistant To Cooperative Extension Director

William T. McNamara, former Champaign County Extension agriculture adviser, has been appointed assistant to the state Cooperative Extension director for personnel and staff development. He assumed his new administrative role on June 6, 1988.

McNamara has been employed by the UI Cooperative Extension Service since 1967, serving as an Extension agriculture adviser in Livingston County before moving to Champaign County in late 1980. In his new position, he will provide leadership for recruitment, selection, placement, and evaluation of both professional and nonacademic Illinois CES staff. McNamara also will be responsible for continuing staff development programs.

McNamara is a native of Dana, Illinois. He earned his bachelor of science degree in farm management in 1967 and his master's degree in extension education in 1976, both at the University of Illinois.

McNamara has served on numerous Illinois CES committees and planning groups, including the agricultural pesticides committee, the regional boundary task force, the state staff development committee, and the state 4-H advisory committee. He also chaired the State Extension Conference Committee in 1983 and represented the Illinois Extension Advisers Association (IEAA) on the Illinois 4-H Foundation board of directors from 1973 to 1979.

McNamara has been active in both the National Association of County Agricultural Agents (NACAA) and the IEAA, serving on numerous association committees. A current member of the Council of Agricultural Science and Technology (CAST), he also has served on the professional advisory committee representing Illinois CES field staff since 1982.

Landmarks in Illinois and U.S. Agricultural Research and Education

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| <p>1862 The United States Department of Agriculture was established by President Abraham Lincoln through legislation signed on May 15.</p> <p>1862 On July 2, President Lincoln signed into law the First Morrill Land-Grant Act. This landmark legislation allotted public land to every state to support the establishment of colleges dedicated to advancement of "agriculture and the mechanic arts."</p> <p>1887 The Hatch Act was approved on March 2. This act authorized the creation of a federally supported and supervised system of state agricultural experiment stations, conducting agricultural research on a systematic basis in conjunction with the various land-grant colleges.</p> | <p>1888 The University of Illinois Agricultural Experiment Station came into existence on March 21. The Station was originally administered by a Board of Directors and included a staff of six, headed by College dean and agriculturist <i>George E. Morrow</i>.</p> <p>1890 The Second Morrill Land-Grant Act, approved on August 30, assured an annual federal grant for each land-grant college, specifically supporting the predominantly black land-grant institutions.</p> <p>1914 The Smith-Lever Act was approved on May 8, providing for the cooperative administration of extension work by the USDA and the state land-grant colleges.</p> |
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AgriView



College of Agriculture/University of Illinois at Urbana-Champaign

Fall, 1989

W. R. Gomes Appointed Tenth Dean of College

W. R. "Reg" Gomes, acting dean of the UI College of Agriculture since August, 1988, has assumed the role of permanent dean of the College following his official confirmation by the UI Board of Trustees in March. His appointment as dean follows a nationwide search and selection process initiated last summer.

Gomes becomes the tenth dean of the College of Agriculture since its founding as part of the Illinois Industrial University in 1867. He succeeds John R. Campbell, who left the deanship last August to become president of Oklahoma State University.

Gomes, an animal scientist whose research specialization is reproductive physiology and endocrinology, also has extensive experience in academic administration. He was appointed professor and head of the UI department of dairy science in 1981 and later became head of the UI department of animal sciences when the dairy science and animal science components were integrated in 1985.

Commenting on his appointment, Gomes called it both an "exciting challenge" and "an exceptional opportunity to work closely with the College's multi-talented faculty and staff to deal with the problems and needs of a changing society."

Today's Illinois agriculture, he noted, is an integral part of an extremely complex global economic enterprise. "Collectively, we in the UI College of Agriculture are determined to have a significant role in advancing the agricultural and human sciences and contributing to the technology and human services needed in the decades ahead."

"I see the development of new issues-oriented programs and the current expansion of the College's research and teaching capabilities as providing an exceptional impetus for progress," Gomes said. "I believe that I speak for our entire faculty and staff in saying that the College intends to be extremely forward-looking and proactive in dealing with societal needs."

Gomes was extensively involved in a number of earlier collegewide projects designed to expand its research and educational opportunities. As head of the animal sciences department, he assumed a key role in the planning phase for the \$17.5 million Animal Sciences Laboratory remodeling and addition. Following the awarding of contracts, construction of this major new research and teaching facility has now begun.



W. R. "Reg" Gomes, tenth UI College of Agriculture dean

Gomes also was a key figure in planning the \$29 million Plant and Animal Biotechnology Laboratory, which will house sophisticated biotechnology and genetic engineering research in both plant and animal fields. Construction of this USDA-funded project is currently well underway.

As animal sciences head, Gomes also was instrumental in the construction of a new Imported Swine Research Laboratory on the Urbana-Champaign campus, the importation of exotic swine breeds from China, and the recent establishment of a new animal research unit at the Orr Agricultural Research and Demonstration Center in western Illinois. This latter facility is designed to provide a regional research and demonstration center for beef production, forage utilization, and related areas.

Among other past achievements, Gomes co-chaired the committee that planned the College's Jonathan Baldwin Turner (JBT) Undergraduate Research/Scholarship Program in 1982 and chaired the committee which instituted the JBT Graduate Fellowship Program in 1986. These programs have since provided fellowships and

(continued on page 2)

Gomes Appointed College Dean

(continued from page 1)

research support for a number of highly talented undergraduate and graduate students pursuing studies in agricultural and home economics fields.

Gomes noted that the current quantum leaps in agricultural science and technology make further efforts of this nature mandatory. "Only with sufficient numbers of highly trained, professionally qualified agricultural scientists can we hope to meet the future needs of agriculture and society as a whole." Gomes added that the College would continue to seek privately funded scholarship and fellowship support for talented undergraduate and graduate students.

In May of this year, Gomes spearheaded the establishment of a new environmental issues task-force in the College, focusing comprehensive research and extension efforts on such pervasive issues as ground-water quality and the environmental impact of current agricultural production practices and chemical use. "Environmental quality, including the wise stewardship of our precious water resources and the preservation of our agricultural production base, will remain a fundamental concern of the College in the years ahead," he noted.

Gomes emphasized that the role of the College in educational, economic, and humanitarian activities abroad will likely grow significantly as our nation becomes further involved in the global community and marketplace. International activities in which he has already participated since assuming the deanship include executive visits to UI institutional cooperation projects at the Northwest Frontier Province Agricultural University at Peshawar, Pakistan and to Egerton University in Njoro, Kenya.

Gomes also has recently helped formalize new institutional ties in Egypt, involving a proposed extension project with Manoufia University there. He completed a trip to France in June with four other deans of major U.S. land-grant institutions to build scientific ties with INRA, the French national institute for agricultural research. INRA (an acronym for the Institut Nationale la Recherche Agronomique) is headquartered in Paris and maintains agricultural research facilities throughout France.

Prior to becoming head of the UI dairy science department in 1981, Gomes was professor of dairy science at The Ohio State University and the Ohio Agricultural Research and Development Center. He also was a Fulbright-Hays Distinguished Traveling Professor at the College of Medicine, Zagreb University, Yugoslavia, in 1974 and a guest professor in the department of animal science, Kyoto University, Japan, in 1980.

Gomes, who is a native of California, earned his bachelor's degree in dairy science at California Polytechnic State University, San Luis Obispo, in 1960. He subsequently completed his master's degree at Washington State University in 1962 and his doctorate at Purdue University in 1965, both in animal reproductive physiology and endocrinology.

Gomes is active in several major professional and honorary societies. He also served on the Council for Agricultural Science and Technology (CAST) board of directors from 1985 to 1988.

Extension Celebrates 75th Anniversary

May 8, 1989 marked the 75th anniversary of the Cooperative Extension Service (now known federally as the Cooperative Extension System) in the United States, as implemented under the Smith-Lever Act of 1914. This landmark legislation, which was passed by the 63rd Congress and signed by President Woodrow Wilson on May 8th of that year, provided for cooperative administration of agricultural extension work by the United States Department of Agriculture and the various state land-grant institutions.

The Smith-Lever Act also authorized recurring federal funding for Cooperative Extension educational programs at a designated public institution in each state. The University of Illinois is very proud of its rich heritage as the designated land-grant institution for the State of Illinois, of its many ties with Cooperative Extension Service (CES) cooperators and volunteer leaders at the grass-roots level, and of its key role as a provider of Cooperative Extension educational programs for the state's many rural and urban citizens.

The week of May 8, 1989 was celebrated with a formal presentation before the University of Illinois Board of Trustees, with UI College of Agriculture dean W. R. Gomes sketching the history of the Smith-Lever Act and its close relationship to the earlier Morrill and Hatch Acts. Acting state CES director Donald L. Uchtmann then introduced a slide set tracing some of CES's recent "success stories": its positive impact on Norman Hill, a Massac County hog production manager; its comprehensive response to the 1988 drought; a thriving 4-H program in Chicago's Cabrini-Green housing project; a successful Greene County program to combat teen pregnancy; and an effective money management program in Pike County.

Additional 75th anniversary celebrations were held throughout the state. In Lake County, UI Board of Trustees members Susan Gravenhorst and Donald Grabowski helped break ground for an expansion of the Lake County CES office. UI president Stanley O. Ikenberry and College dean W. R. Gomes also spoke at a gathering of 200 political leaders, corporate sponsors, and CES cooperators in Chicago.



The \$29 million UI Plant and Animal Biotechnology Laboratory, a federally funded capital project, is rapidly taking shape at a centrally located site just east of the present Animal Sciences Laboratory and north of Turner Hall.

From the Dean's Desk

by W. R. "Reg" Gomes

The 75th anniversary of the Cooperative Extension Service, highlighted elsewhere in this issue of *AgriView*, provides an excellent opportunity to pause and reflect on the remarkable accomplishments of this unique educational system and its adaptability to changing societal needs.

Seaman B. Knapp's early vision of a nationwide educational organization providing practical, research-based information to farmers and other rural clientele has since been broadened to encompass informational and educational outreaches to many other facets of our democratic society. Knapp's emphasis on *demonstrations* to visually present and reinforce research-based knowledge also has been retained as an integral part of Extension's approach to adult and youth education.

As the dean of agriculture at the University of Illinois, I find it particularly satisfying to review the tradition of excellence that has marked the long history of the Illinois Cooperative Extension Service. Indeed, it was one of the key contributors to the early growth and development of the national Cooperative Extension System, while also responding to the many problems and needs of rural Illinoisans.

The University of Illinois could proudly boast of an Extension division as early as 1901, more than a decade before the passage of the landmark Smith-Lever Act in 1914. Its county meetings and short courses for farmers, stockmen, and homemakers represented the initial step in bringing the knowledge of the state's land-grant university to the people.

Extension's early leaders, including UI College of Agriculture dean Eugene Davenport and superintendent Fred H. Rankin, recognized the social and economic value of a people-oriented educational outreach—a philosophic concept that has persisted, and indeed flourished, through three-quarters of a century of dramatic societal change and growth. However, even they could not have envisioned the great scope and diversity of today's Extension programs and activities, reaching many rural and urban clientele.

Celebration of Extension's 75th anniversary demands a close look at its future, as well as an acknowledgment of past successes. What, we may ask, is the future societal role of this organization—and how can it best serve the complex needs of today's and tomorrow's changing clientele?

It is clear that the Extension organization of the future must remain flexible, people-oriented, and sensitive to high-priority problems and needs. As noted in a recently completed College study on Extension organization (June, 1989), there is a demonstrated need for "vision" and a "synergistic relationship" between CES, the Illinois Agricultural Experiment Station, and academic departments in the College and School.

It is obvious, too, that Extension must become increasingly *proactive*, rather than *reactive*, in its future educational outreach—anticipating and assessing major societal needs and being "out front" in providing educational leadership and direction for its adult and youth clientele. The increasingly limited availability of human and monetary resources means that Extension will need to maximize its cooperative involvements with the College's research component, with local agencies and program councils, and with other educational organizations to achieve these goals.

Additionally, it is clear that Extension must emphasize an interdisciplinary, issues-oriented approach in its future educational programming if it is to optimize its effectiveness as an educational organization. Recent state and national efforts to define high-priority problem areas have, in fact, resulted in a "focusing in" on some critically important societal issues that demand a multi-faceted approach: profitability and sustainability of agriculture; family well-being; food, nutrition, and wellness; environmental quality; community development and revitalization; leadership development; and youth at risk.

Defining these broad priorities and goals represents an excellent starting point, although Extension plans to become even more visionary, proactive, and definitive in carrying out its future educational role. In this regard, I might cite its key role in a new environmental issues task-force recently established in the College or in such initiatives as "Positive Peer Power" and "Youth 2000," 4-H sponsored programs designed to build youth self-esteem and deal with such problems as teen pregnancy and substance abuse. These are but two examples of issues-oriented initiatives that transcend traditional program areas and modes of Extension programming.

Tomorrow's Extension faces major challenges in maximizing the use of limited resources, *optimizing* its cooperative ties and educational impact, and *prioritizing* its focuses. Its future success and credibility as a publicly financed educational organization will undoubtedly depend on planning for these results today.

Ag Construction Update '89

The beginning of the 1989-90 academic year finds significant progress being made in the College's various capital development projects. Construction of the \$29 million Plant and Animal Biotechnology Laboratory (PABL) continues on schedule, with the PABL exterior slated for completion by late November. When the interior of the new facility is finished in December, 1990, the PABL will house a broad array of biotechnology research programs conducted by UI plant and animal scientists and U.S. Department of Agriculture researchers.

Following a brief delay, new construction bids have been approved for the \$17.5 million Animal Sciences Laboratory (ASL) addition and remodeling. The current phase of the project, Phase 2, is now underway. It includes construction of an ASL addition containing 38,000 net assignable square feet of space and remodeling of the south wing of the existing structure.

Funds also are available to complete a substantial portion of Phase 3, remodeling of the east-west wing of the ASL. According to College planning engineer, Douglas B. Bauling, additional monies are now being sought to complete the entire remodeling project.

Arrival of 46 Chinese Pigs Ushers in New Research Program

Wrinkled, long-eared pigs from the People's Republic of China have recently made their debut in east-central Illinois, occupying sparkling new quarters in the recently completed Imported Swine Research Laboratory (ISRL) on the Urbana-Champaign campus. And the ultimate beneficiaries of this new arrival in late July may be pork producers and consumers throughout Illinois and the nation.

After successfully completing a four-month quarantine period at the Harry S. Truman Animal Importation Center in the Florida Keys, 46 Chinese pigs representing three major swine breeds raised in mainland China are now housed in the ISRL to take part in a multi-year breeding and genetic improvement program. The Imported Swine Genetic Research Program, headed by UI animal scientist **David G. McLaren**, will focus on combining the desirable, heritable traits of the Chinese pigs with major commercial breeds commonly produced in the United States.

The Chinese pigs are known for their exceptional prolificacy and reproductive capability, although their meat has a higher fat content than that of the lean, streamlined domestic swine commonly marketed in Illinois and the U.S. Through a controlled cross-breeding program and other forms of genetic manipulation, UI animal scientists hope to develop what some observers have called a "super pig"—combining the leanness sought by today's health-conscious meat consumer with the economic advantage of larger litters and greater numbers of weaned pigs per litter.

Chinese sows of the three breeds to be studied—Meishan, Fengjing, and Minzhu—produce about 15 pigs per litter, as compared to fewer than 10 pigs per litter for domestic swine. The Chinese sows also wean a significantly larger number of pigs per litter than our domestic swine, about 12 weaned pigs per litter compared to our longtime average of about eight.

McLaren emphasized the considerable economic importance of improving the number of weaned pigs per litter produced in Illinois and the U.S. and thus increasing the production efficiency, competitiveness, and profitability of the pork industry. "If we can improve the average number of weaned pigs in U.S. litters from eight (where it has been for some years) to 11, we could save producers an estimated \$9.00 per pig produced," he said. "Illinois annually produces about 8.7 million pigs, and the larger litters would mean about \$78 million per year in reduced production costs for our state's pork producers."

McLaren noted that the use of the growth hormone, porcine somatotrophin (PST), may be beneficial in reducing objectionable body fat in offspring of Chinese and domestic breeds. Extensive studies at the University of Illinois have revealed that domestic swine produce much higher levels of muscle tissue (and proportionately lower levels of body fat) when PST is used during the finishing period.

The University of Illinois received one-third of the Chinese pigs imported from the People's Republic of



UI animal scientist David McLaren (second from left) and other staff members herd two of the forty-six newly arrived Chinese pigs into their future quarters at the UI Imported Swine Research Laboratory. The prolific Chinese pigs will be used in a multi-year genetic research program designed to improve the reproductive capability and economic productivity of commercial swine in Illinois and the United States. The imported pigs, which are from various areas of the People's Republic of China, arrived in late July after a four-month quarantine period in Florida.

China, following several years of negotiations. The new ISRL, constructed with "Build Illinois" funding support, will initially house 21 Meishan gilts and 10 Meishan, eight Fengjing, and seven Minzhu boars.

In addition to maintaining a purebred Meishan line, UI animal scientists will cross-breed the Chinese pigs with domestic breeds. They also plan to conduct studies in several related areas, including genetics, reproductive physiology, nutrition, environmental physiology, animal behavior, immunobiology/immunogenetics, muscle biology, meat science, and veterinary medicine.

Other research institutions receiving the remainder of the Chinese pigs include Iowa State University and the USDA/ARS Meat Research Center in Lincoln, Nebraska. Animal researchers involved in the three multi-year genetic improvement programs will share research data derived from their separate studies. The UI program also will benefit from the oversight of a 21-member statewide advisory committee, composed of prominent pork producers and other industry representatives.

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Dedication Ceremonies Held For New UI Plant Sciences Laboratory

Formal dedication ceremonies were held on April 15 for the new \$10.5 million UI Plant Sciences Laboratory (PSL). The state-of-the-art laboratory and greenhouse complex, which is located just east of Turner Hall on the Urbana-Champaign campus, will provide sophisticated new facilities for research and teaching programs of the UI departments of horticulture, plant biology, plant pathology, and forestry.

A number of key campus and university officials, state legislators, alumni, and other dignitaries were present for the occasion, which marked completion of the final construction project in the long-range Food for Century III capital development program begun in the late 1970s. Participants in the morning dedication ceremonies included UI president **Stanley O. Ikenberry**, UIUC chancellor **Morton W. Weir**, state senator **Stanley B. Weaver**, state representative **Helen F. Satterthwaite**, and student members **R. Scott Wylie** and **James Evenson** of the UI Board of Trustees.

Representing the UI College of Agriculture in the ceremony and subsequent tree-planting on the east lawn of the PSL were dean **W. R. "Reg" Gomes**, Agricultural Experiment Station director **Donald A. Holt**, and associate dean **William L. George**.

George also serves as acting head of the horticulture department, whose research and teaching faculty will be permanently housed in the new complex. A number of faculty members in plant biology, plant pathology, and forestry also will maintain laboratories and support facilities in the PSL.

Weir, Ikenberry, and others lauded the long-term efforts of many University of Illinois and College of Agriculture supporters in bringing the Food for Century III program to fulfillment, despite the many financial and other obstacles that it faced over the past decade. Weir noted that the new state-funded facility represented a sound investment in scientific and technological innovation, as well as a valuable new tool to meet "the ever-increasing demand on our agricultural research and educational system."

Public investment in the PSL and the Food for Century III program as a whole, Weir emphasized, would have a positive effect on the Illinois economy and environment for decades to come. "We have long realized the fact that education and research represent major new tools that can lead to new markets and uses for Illinois agricultural and horticultural products. They lead to increased and expanded food production, better transportation systems for delivering agricultural products, improved food packaging and preservation, safer and more environmentally accommodating fertilizers and herbicides, more pest-resistant plants, and new plants to enhance the aesthetics of our everyday environment."

Weir added that the PSL would be a valuable addition to the College's R&D capability in dealing with growing environmental concerns, which have "created a need to study potential contaminants closely and to use limited natural resources more efficiently."



UI president **Stanley O. Ikenberry** (left) shovels earth around a newly planted tree east of the Plant Sciences Laboratory headhouse. Members of the platform party were interested onlookers at the tree-planting ceremony, which was part of the PSL dedication.

A cadre of researchers, educators, and extension specialists from the four academic departments will utilize the new PSL to conduct more than sixty major research and teaching programs in a broad spectrum of plant science fields. The facilities include nineteen laboratories and ten environmentally controlled greenhouse ranges for studies in such specialized areas as plant tissue culture, plant-environment interactions, stress physiology, transgenic manipulations, plant photosynthesis, rapid plant propagation, plant growth regulators, controlled environment agriculture, sustainable agriculture, and integrated pest management.

Specialized features of the 47,000-square-foot greenhouse complex include computer monitoring and control for manipulation of temperature, humidity, carbon dioxide, high-intensity discharge lighting, irrigation, and black-cloth photoperiod systems. Several greenhouses incorporate a unique soil-bed system with controlled drainage and capability for *in situ* soil pasteurization. Insect isolation rooms, refrigerated bays, intensive environmental control areas, mist propagation rooms, and a tall conservatory add to the unique features of the complex.

College dean **W. R. Gomes** termed the PSL "an invaluable state resource," geared to meet the future needs of the horticultural industry, production agriculture, and the environment. "We envision that the PSL will facilitate both basic and adaptive research in today's increasingly sophisticated plant science fields, including interdisciplinary work in biotechnology, tissue culture, and transgenic manipulations. The end result of this work will undoubtedly be more efficient, more productive crops and ornamentals—a benefit to farmers, homeowners, and food consumers alike."

From an environmental perspective, Gomes added, the PSL also will help advance collegewide initiatives in such key areas as integrated pest management, controlled-environment horticultural production, and sustainable agriculture. "These are significant ways in which we can contribute to both the economic well-being of Illinois agriculture and the future integrity of our state's natural resources."

Remodeled Agricultural Bioprocess Lab Yields Major Research Innovations

A \$1.3 million renovation of the UI Agricultural Bioprocess Laboratory (ABL) has recently been completed, paving the way for expanded research activities in developing new value-added agricultural products and processes. Despite the relative newness of the ABL, it is already yielding a wealth of major research innovations that should prove beneficial to agricultural producers, consumers, and processors of food and industrial products alike.

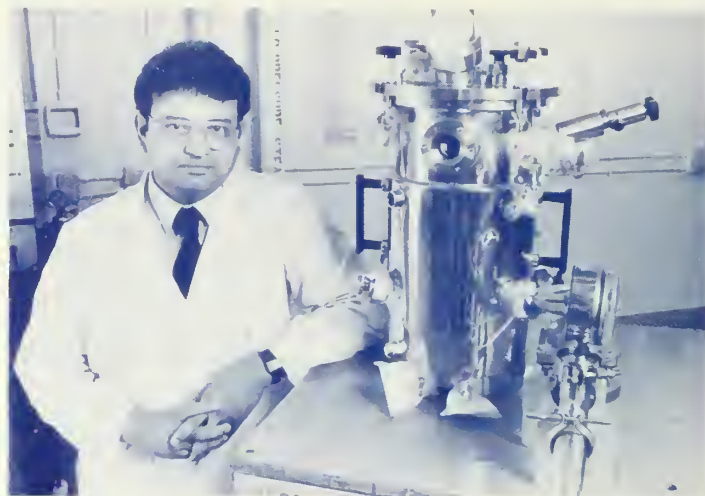
Each of the building's three floors houses a major research program and incorporates specialized laboratories, pilot plants, and essential support space. Major research areas represented in the ABL include those in food processing technologies, bioprocessing and food engineering techniques, and plant physiology and biochemistry.

Remodeling funds for the 10,000-square-foot first floor and basement level of the former Dairy Manufacturers Building were provided by the State of Illinois through its "Build Illinois" capital development program. Approximately \$250,000 for this remodeling project also were derived from a recurring legislative appropriation for value-added research activity at the University of Illinois. Researchers from the UI Department of Food Science and the International Soybean Program (INTSOY) occupied these new facilities for the first time earlier this year.

An earlier appropriation of some \$700,000 under the UIUC "Remodeling for Excellence" program provided funds for the development of state-of-the-art research facilities on the ABL's second floor. This area of the building houses innovative research in the plant sciences, including work in plant physiology, photobiology, and biochemistry. This portion of the ABL was renovated and occupied in 1987.



INTSOY staff members work with a continuous operation extruder-expeller system designed to produce high-quality soybean meal and oil. The experimental technology, which is under study in the lower-level pilot plant of the Agricultural Bioprocess Laboratory, is particularly well-suited for village or regional use in developing countries.



Munir Cheryan, UI professor of food and biochemical engineering, works with a new ten-liter scaleup of a continuous bioreactor. The experimental unit, which incorporates a ceramic microfiltration module, is being used in the production of high-value glucose, lactic acid, ethanol, and other industrial feedstocks and commodity chemicals.

Ongoing research in soybean processing and utilization is centered in a 2,600-square-foot pilot plant located in the ABL's basement level. According to INTSOY's utilization leader, Alvin I. Nelson, the new processing technologies and soy products being developed there hold substantial promise for Third-World nations, where there is a critical need for low-cost processing systems and high-protein food products.

UI utilization research also can have significant economic and nutritional benefits for domestic users in terms of high-quality soybean oil, full-fatted and partially defatted soybean meal, and derived soy products for human and animal use. Illinois swine producers, for example, are already using extrusion technology similar to that being studied by the INTSOY staff to manufacture full-fatted soy meal from raw soybeans on the farm. Users of this technology, mainly larger swine producers, report good success in using the extruded, full-fatted meal in swine diets.

The newly renovated ABL includes areas for both wet and dry processing of soybeans. The dry processing area contains single-screw extruders for high-temperature, extrusion processing of soybeans and cereal crops, as well as extruder-expeller equipment designed to efficiently produce both soy meals and high-quality, shelf-stable soy oils.

Nelson emphasizes that INTSOY's current R&D work is aimed at refining the continuous operation extruder-expeller system previously developed, confirming its economic feasibility, and adapting it to a broad range of uses at home and abroad. INTSOY staffers envision greatly expanded use of extruder-expeller technology under a variety of global conditions where low to moderate-cost soybean processing is absolutely essential.

Other ongoing value-added research in the food science/INTSOY area of the ABL includes studies with soy milk and other dairy analogues, high-protein soy-cereal blends, and frozen or fresh green soybeans used as a table vegetable. Researchers also are exploring the nutritional and therapeutic potential of the so-called "Omega-3" constituent in processed soy products, which some scientists believe is beneficial in alleviating or preventing heart disease.

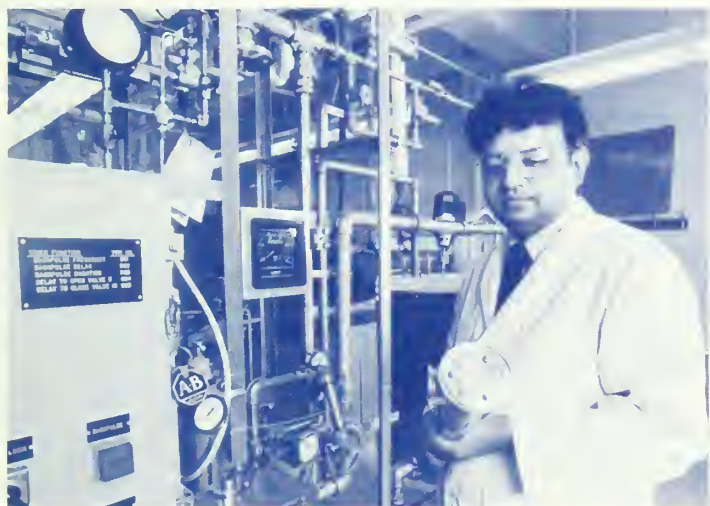
Munir Cheryan professor of food and biochemical engineering, is developing a number of innovative, high-tech processes to produce value-added organic chemicals, industrial feedstocks, and fuels from agricultural commodities and wastes. His pilot plant and biochemistry laboratory, located on the first floor of the ABL, house several types of bioreactors, microfiltration and ultrafiltration systems, and fermentors designed to produce high-value chemical products more quickly and efficiently than normal commercial batch processes.

Under a three-year value-added grant from the State of Illinois, Cheryan has developed a laboratory scale-up of a membrane recycle bioreactor that is being used to produce industrial feedstocks from corn starch. Cheryan noted that the process is more efficient than the typical process used by corn refiners. One of its applications is for the continuous production of high-purity glucose or dextrose, the chemical precursor of ethanol and other valuable biochemicals.

Growing public interest in environmental quality and improved fuel emissions standards, coupled with the growing demand for renewable fuels, has made the use of corn-derived ethanol increasingly attractive, Cheryan noted.

Cheryan also stressed the growing importance of the continuous bioreactor technology for the future production of such valuable organic chemicals and feedstocks as lactic acid, acetic acid, butanol, and butanediol. These so-called "commodity chemicals" serve as precursors in the production of plastics, synthetic rubber, and other mass-produced commercial products, many of which are currently derived from petroleum.

With funding support from the Illinois Corn Marketing Board, Cheryan also is investigating improved means of producing and recovering CMA, or calcium magnesium acetate, from corn starch. The agriculturally derived chemical product has shown great promise as an environmentally safe, noncorrosive road de-icer. Cheryan is currently employing bioreactors and membrane separation, including electrodialysis, in efforts to lower the production cost of CMA.



Munir Cheryan is shown with a recently fabricated microfiltration system for use with ceramic membranes. The unit has sophisticated controls to maximize its performance in specific applications. This technology may be used to effectively remove bacteria and subcellular particles from food and industrial products, greatly enhancing their stability, purity, and/or shelf-life.



Constantin A. Rebeiz heads a team of UI scientists investigating the effects of photodynamic herbicides and insecticides on various agricultural and home pests.

Constantin Rebeiz, professor of plant physiology and photobiology, heads a research team housed on the second floor of the ABL. Rebeiz is nationally and internationally known for his pioneering discoveries of photodynamic herbicides and insecticides, as well as for his investigations of the plant greening process and man-made photosynthetic membranes.

Rebeiz continues to refine and build upon his earlier work with photodynamic (or light-activated) herbicides, which utilize a common amino acid found in nature, ALA, to activate an uncontrolled accumulation of tetrapyrroles (photosensitizers) in weed tissue. This light-activated biochemical reaction serves to quickly destroy the weed plant.

In his recent research, Rebeiz and his associates have investigated the molecular basis of herbicide selectivity and the nature of photodynamically active modulators. These are biochemical constituents that serve to enhance ALA activity, induce ALA formation, or inhibit such formations.

Rebeiz envisions a promising future for photodynamic herbicides and porphyrin insecticides, based on today's growing interest in environmental quality. The agricultural pesticides he has developed are biodegradable, fast-acting, and safe for the environment, he notes. Rebeiz also is working on an environmentally safe, ALA-based home insecticide.

Rebeiz continues to investigate and delineate the structure of multi-branched biosynthetic pathways in plants and has demonstrated the existence of two major classifications of plants (monovinyls and divinyls), based on the chemical structure of the chlorophyllides they produce. In longer range studies, he and his research associates have been working to develop an artificial photosynthetic membrane, from which value-added fuels, organic chemicals, and feedstocks could be industrially produced.



Cooperative Extension Service
University of Illinois at Urbana-Champaign

Celebrating 75 years

Extension Program Aids Conservation Planning

Between 1987 and 1990, Illinois farmers will have to develop an estimated 70,000 conservation plans for their land—equal to the number developed between 1935 and 1988. Failure to do so results in ineligibility for federal farm programs.

Conservation provisions of the 1985 Food Security act, the farm bill, created this requirement that could be a time-consuming, even confusing, procedure for some producers. A conservation plan involves strategies to reduce erosion to acceptable levels and control other resource problems. The plans must be implemented by 1995.

The numbers of farmers affected by the provisions made one-on-one plan development impractical, but after the idea became law, now-retired University of Illinois Cooperative Extension Service natural resources specialist Robert Walker saw a way to help.

Walker's idea eventually became the Conservation Systems Workshop, a program for teaching producers, in a group setting, how to construct the required conservation plans.

"This program is designed to meet conservation planning needs in an array of settings across the country," explains Richard Farnsworth, University of Illinois agricultural economist who directed the program. Communications support was provided by the UI Office of Agricultural Communications and Education. Cooperating in development of the project was the U.S. Soil Conservation Service.

The workshop includes explanation of the 1985 law's provisions, use of aerial photos and soil maps to determine if lands are highly erodible, how to identify wind and water erosion problems, and evaluation of the economics of alternative control strategies.

A series of pilot workshops in 1987 indicated that producers, with assistance from experts, can handle the task of preparing conservation plans for their land.

Peter D. Bloome, assistant director of the U of I Cooperative Extension Service, sees the Conservation Systems Workshop in the tradition of Extension programming. "When farmers take a major role in developing their own conservation plans, as they do with these materials, there is a greater chance they will be committed to the plan and to conservation in general," he says.

4-H Combats Despair In Chicago "War Zone"

Its 8,000 residents are jammed into an area three blocks long by five blocks wide, with a 65 percent unemployment rate and an average family income of \$5,000. The children who live here and manage to finish eighth grade are 2 1/2 years behind the national average in reading skills.

This is the Cabrini-Green Housing Project in Chicago, an area recently compared to Beirut, Lebanon by CBS News. Gunfire is a deadly, daily fact of life. Children face immediate and constant pressure to join gangs, whose members stage gun battles in darkened hallways and on littered playgrounds.

Here, too, is a program that tries to offer the children of Cabrini-Green an alternative, a program more associated in the public mind with green meadows and county fairs than concrete-and-brick high rises sheltering broken dreams. Amid the poverty and danger, the University of Illinois Cooperative Extension Service's 4-H youth program has taken root.

"We're trying to provide stable, normal activities for these children in an abnormal environment," explains Marilyn Norman, Extension youth adviser in Cook County.

Working under sponsoring organizations like the Society of Friends, the Chicago Housing Authority and the Chicago Police Department, 4-H club programming offers positive activities, builds self-image and, hopefully, points a way out of the cycle of poverty and death.

"People in Cabrini-Green who want to avoid the violence can fall into another kind of trap—one of alcohol and drug abuse, isolation, an inability to relate to the rest of the world," says Norman.

"These kids don't want the pressure they get from gangs. They'd like to have a nice, normal childhood."

For a few hours each week from August to May, 190 of these youngsters escape their harsh world by involvement in activities stressing decision-making, personal development, and goal-setting.

"Extension has a proven record in programming that gives people learning experiences that can be applied throughout their lives," she says. "We try to make the programming in Cabrini-Green meaningful. We try to impart values that the child can continue to apply throughout life."

There are already signs of success. Last year, over 50 percent of the youngsters in the clubs met the goals they had established for themselves at the start of the year. One club member also was selected to represent the Cabrini-Green clubs at the National 4-H Conference in Washington, D.C.

For Norman, the lesson is clear.

"The 4-H model of youth activities does work if it is allowed to adapt to the needs of the communities," she says. "This may be a far cry from the county corn or pig clubs of the turn-of-the-century, but just as those clubs helped to better the life of their community, the Cabrini-Green clubs are helping in an urban environment."

"We believe we are making a difference."

Extension Focuses on Child Day-Care Issues

It started with a telephone call.

"I received a call from **Karen Wignall**, an Extension adviser in Stephenson County, who was seeking help for a local school principal. It seems he had 50 children standing around on his playground every morning at 7 a.m. because their parents worked and they had nowhere else to go," recalls **Chris Todd**, University of Illinois Cooperative Extension Service child development specialist.

That phone call led to a latchkey children's program for Stephenson County that eventually spread statewide, providing information on safety skills for children without adult care in the before and after-school hours. And that program in turn involved Extension in the issue of day-care.

"Day-care is one of the emerging issues of the 1990s. Both political parties have endorsed it and working parents know of the tremendous challenges and concerns involved in finding top-quality day-care for their children," explained Todd.

"It is a perfect issue for Extension given the system's strengths, and, in addressing it, we meet a pressing need."

In Illinois, Todd and Extension have taken a leadership role in providing quality day-care for the state's parents and children in a number of ways. Education, Extension's prime mission, is an important part of the effort.

Cooperating with the Illinois Department of Children and Family Services (DCFS) which licenses day-care centers, Extension has launched workshops and mini-courses for day-care center workers, making them better informed on a range of issues. Utilizing DCFS funds, Extension also publishes two newsletters—Family Day Care Connections and School Age Connections—which provide up-to-date information for day-care providers.

"Some topics are tailor-made for Extension and child day-care is an example," explains Todd. "It is a problem that requires an interdisciplinary approach, using nutrition, health, child development, business and other specialists. We have specialists in all these areas."

"Extension is also a grassroots system. Child care is a very personal issue and parents and day-care providers are more inclined to listen to instructors from their own community rather than experts from far away. We have the ability to provide training locally and still utilize the U of I's expertise."

Success in these efforts has led to Extension involvement in a statewide initiative—a Child Care Resource and Referral Service.

"This would be a service to help parents find day-care, to provide interested persons with information about starting up day-care operations, to train day-care providers and compile and distribute statistical information about day-care availability and needs that could help in the appropriation of government funds," says Todd.

"We're helping DCFS with this project by using our statewide system of Extension to hold informational sessions on the concept and helping to foster the development of regional networks of individuals interested in offering resources and referral services."

UI Extension Provides Impetus For New "Rural Partners" Coalition

Rural Partners, a new statewide initiative in rural community and economic development, has recently been established with a major impetus from three faculty members of the UI Cooperative Extension Service.

A kickoff meeting for the new coalition of public- and private-sector organizations concerned with Illinois rural development was held June 14 on the State Capitol grounds in Springfield. More than 175 persons and representatives of 42 sponsoring groups were in attendance, including Governor **James R. Thompson**, Lieutenant Governor **George Ryan**, and many prominent rural and agricultural leaders from throughout Illinois.

Rural Partners evolved from a proposal prepared by **Jerry W. Robinson**, professor of rural sociology extension; **John C. van Es**, professor of rural sociology; and **David L. Chicoine**, professor of taxation and public finance policy and recently appointed head of the UI Department of Agricultural Economics.

In February, 1989, the trio proposed that an "Illinois Coalition for Rural Community Development" be established to pool the human resources, professional and leadership skills, and communications capabilities of various public- and private-sector organizations with a stake in rural community and economic development.

As organized, Rural Partners will strive to foster leadership development and creative decision-making in rural Illinois communities, particularly in developing sound economic development strategies. Its mission statement also encourages the cooperative participation of concerned associations and organizations throughout Illinois as partners in rural community development and economic progress.

Among those items on the Rural Partners agenda for possible sponsorship are an Extension project entitled "Helping Illinois Communities Prepare for Economic Development"; the 1990 Rural Leaders Forum; an annual report on economic conditions in rural Illinois; public hearings on a comprehensive statewide policy for rural development; and programs which assist and support the development of local leaders.

According to **Donald L. Uchtmann**, acting state Extension director, this agenda affords numerous opportunities for future professional and educational involvement by the UI Cooperative Extension Service. Participation in Rural Partners also reflects Extension's ongoing commitment to one of its major issues-oriented program areas, rural economic development and revitalization.



Cooperative Extension Service
University of Illinois at Urbana-Champaign

Celebrating 75 years

Faculty Research Grants

The following research grants have been awarded to faculty members in the University of Illinois College of Agriculture for start-up dates from July 1, 1988 through September 1, 1989. Parenthesized information indicates the awarding agency or organization, the total dollar amount of the research grant, and its duration. (Grant information is furnished by the Illinois Agricultural Experiment Station.)

Theodore Hymowitz and Ram J. Singh, Department of Agronomy, "Genomes of the Genus *Glycine* Willd" (U.S. Department of Agriculture, \$101,000, 9/1/88 to 8/31/90).

Sung M. Lim and Jack M. Widholm, Department of Agronomy, "Application of Plant Tissue Culture in Soybean Improvement for Brown Spot Resistance" (Illinois Soybean Program Operating Board, \$44,220, 9/1/88 to 8/31/91).

Angus M. Hepburn and Jack M. Widholm, Department of Agronomy, "The Improvement of Soybeans by Genetic Manipulation" (Illinois Soybean Program Operating Board, \$16,000, 9/1/88 to 8/31/91).

Theodore Hymowitz, Department of Agronomy, "Increasing the Nutritional Value of Soybeans by Genetic Manipulation of the Protease Inhibitors" (Illinois Soybean Program Operating Board, \$14,000 and \$42,000, 9/1/88 to 8/31/91).

Angus G. Hepburn, Department of Agronomy, "The Improvement of Soybeans by Genetic Manipulation" (Illinois Soybean Program Operating Board, \$48,000, 9/1/88 to 8/31/91).

Poo Chow, Department of Forestry, "Physical Properties of Boards from Combinations of Wood/Ag Residue Fibers/Non-Wood Materials" (U.S. Forest Service, \$15,984, 9/1/88 to 9/30/89).

Walter L. Hurley, Department of Animal Sciences, "Cellular and Molecular Biology of Bovine Lactoferrin" (U.S. Department of Agriculture, \$175,767, 9/15/88 to 9/30/91).

Willard J. Visek, Department of Food Science, "Assessment of Lysine and Arginine Status and Requirements in Humans Using Blood and Urine Metabolites as Indicators" (U.S. Department of Agriculture/ARS, NAA, ERRC Agr., \$25,000, 9/15/88 to 9/14/89).

John B. Braden, Department of Agricultural Economics, "Mechanisms for Stream Corridor Protection: Rural Programs, Costs and Revenue Sources" (Illinois Department of Energy and Natural Resources, \$23,967, 9/19/88 to 3/17/89).

Sonya B. Salamon and C. L. Beale, Division of Human Development and Family Ecology, "Monograph on Prairie Farmers" (U.S. Department of Agriculture/ERS, \$10,000, 9/30/88 to 9/29/90).

Ivan J. Jansen, Department of Agronomy, "Laboratory Testing of Soil Samples for Soil Surveys" (U.S. Department of Agriculture, Soil Conservation Service, \$51,660, 10/1/88 to 9/30/89).

Peter J. Bechtel, Ricardo Villota, Floyd K. McKeith and Jan E. Novakofski, Department of Animal Sciences, "Increasing Consumer Demand for Beef with New Ex-

truded Beef Products" (National Livestock Marketing Board/Beef Research Program, \$14,372, 10/1/88 to 9/30/89).

Jan E. Novakofski, Floyd K. McKeith, and Tom R. Carr, Department of Animal Sciences, "Beef Surimi: Information Needed to Get Approval for Use" (Illinois Beef Council, \$9,680, 10/1/88 to 9/30/89).

Robert A. Aherin, Department of Agricultural Engineering, "Illinois Farm Injury Survey" (Pennsylvania State University, \$8,500, 11/1/88 to 6/30/89).

David L. Chicoine and John T. Scott, Department of Agricultural Economics, "Farmland Assessment Data/PA 82-121 (1999)" (Illinois Department of Revenue, \$6,554, 11/15/88 to 6/30/89).

Jan E. Novakofski, Floyd K. McKeith, and Tom R. Carr, Department of Animal Sciences, "Pork Surimi: Characterization and Evaluation of Commercial Potential" (Illinois Pork Producers Association, \$10,000, 7/1/88 to 6/30/89).

David G. McLaren and Floyd K. McKeith, Department of Animal Sciences, "Serial Real-Time Ultrasonography of Pigs to Predict Body Composition and Carcass Characteristics at Market Weight" (National Pork Producers Council, \$6,900, 7/1/88 to 6/30/89).

David G. McLaren, Philip J. Dziuk, and Lawrence B. Schook, Department of Animal Sciences, "Experimental Determination of the Etiology of Maternal Effects in Swine" (National Pork Producers Council, \$13,000, 7/1/88 to 6/30/89).

Constantin A. Rebeiz, Department of Horticulture, "Chlorophyll Biosynthesis: Biosynthetic and Regulatory Studies of the Reactions Between Coproporphyrinogen and Chlorophyll A" (National Science Foundation, \$349,000, 7/1/88 to 6/30/91).

Steven R. Eckhoff, Department of Agricultural Engineering, "Gaseous Addition of SO₂ to Corn to be Wet Milled" (Corn Refiners Association, Inc., \$23,996, 7/1/88 to 6/30/89).

David L. Thomas, Department of Animal Sciences, "Genetic Improvement of Sheep-Biology of the Spider Syndrome and Selection for Reproductive Rate" (Illinois Department of Agriculture, \$20,000, 7/1/88 to 6/30/89).

Barbara P. Klein and Hans P. Blaschek, Department of Food Science, "Effects of Post-Packaging Pasteurization and Refrigerated Storage of Vacuum Packaged Beef Roast Slices on Microbial Growth and Toxin Formation" (National Livestock and Meat Board, \$14,400, 7/1/88 to 6/30/89).

Donald P. Briskin, Department of Agronomy, "Structure, Mechanism and Regulation of the Plant Plasma Membrane Atpase" (U.S. Department of Agriculture, \$151,000, 8/1/88 to 7/31/90).

Jan E. Novakofski, Floyd K. McKeith, and Peter J. Bechtel, Department of Animal Sciences, "Beef and Pork Surimi: Characterization and Evaluation of Commercial Potential" (Illinois Corn Marketing Board, \$10,000, 8/1/88 to 7/31/90).

Donald G. White, Department of Plant Pathology, "Use of Fungicidal Grain Protectants to Reduce Production Costs and Improve Grain Quality" (Illinois Corn Marketing Board, \$33,000, 8/1/88 to 7/31/89).

J. Bruce Litchfield, Department of Agricultural Engineering, "Corn Characteristics: Identification of Corn Properties for Utilization in New Products" (Illinois Corn Marketing Board, \$39,600, 8/1/88 to 7/31/90).

Cecil D. Nickell, Department of Agronomy, "Soybean Breeding and Genetics" (Illinois Soybean Program Operating Board, \$125,000, 8/21/88 to 8/29/93).

Constantin A. Rebeiz, Department of Horticulture, "Photodynamic Herbicide Formulations for Wheat" (Roussel-UCLAF, \$100,000, 8/21/88 to 8/20/89).

Cecil D. Nickell, Department of Agronomy, "Soybean Breeding and Genetics" (Illinois Soybean Program Operating Board, \$25,000, 8/21/88 to 8/20/93).

Leslie L. Christianson, Department of Agricultural Engineering, "Building Research: Room Air and Air Contaminant Distribution Symposium" (U.S. Department of Agriculture/CSRS, \$8,000, 12/1/88 to 11/30/89).

Munir Cheryan, Department of Food Science, "CMA From Corn: Improving the Production and Recovery Processes" (Illinois Corn Marketing Board, \$158,290, 3/1/89 to 2/28/92).

John F. Reid and J. Bruce Litchfield, Department of Agricultural Engineering, "In-Situ Image Processing for Real-Time Control of Bioprocesses" (ARI, \$130,811, 4/1/89 to 3/31/90).

Ion C. Baianu, Department of Food Science, "Structural and Hydration Studies of Potato Starch in Relation to Functionality" (U.S. Department of Agriculture/NFC/ARS, \$12,000, 5/1/89 to 4/30/91).

Guillermo A. Mendoza, Department of Forestry, "A Computer-Assisted Decision Support System for the Primary Processing of Hardwood Forest Products" (Forestry Research, \$41,000, 5/1/89 to 4/30/91).

Joseph V. Maddox, Office of Agricultural Entomology, "Classification of Gypsy Moth Microsporidia" (U.S. Department of Agriculture/Forest Service, \$41,078, 5/15/89 to 5/14/90).

Michael C. Hirschi, Department of Agricultural Engineering, "Surveying Review" (Illinois Department of Transportation, \$7,830, 6/1/89 to 5/31/90).

Lowell D. Hill, Department of Agricultural Economics, "Costs and Benefits of Redefining the Grade Factor Broken Corn for EIGH Material (BCFM) in Corn" (Illinois Corn Marketing Board/Ohio State, NC-151, \$69,000, 7/1/89 to 6/30/90).

Marvin R. Paulsen and Steven R. Eckhoff, Department of Agricultural Engineering, "Use of an Ethyl Oleate to Increase the Drying Rate of Corn" (Illinois Corn Marketing Board, \$3,500, 7/1/89 to 12/30/90).

Hans P. Blaschek, Department of Food Science, "Physiological Characterization of Clostridium Acetobutylicum Transformants and Mutants for Butanol Production from Corn Starch" (Illinois Corn Marketing Board, \$65,306, 7/1/89 to 6/30/91).

David G. McLaren, et al, Department of Animal Sciences, "Characterization of Purebred Meishan Pigs" (Illinois Pork Producers Association, \$16,353, 8/1/89 to 7/31/90).

David W. Onstad and Joseph V. Maddox, Office of Agricultural Entomology, "Biological Control of the

European Corn Borer" (U.S. Department of Agriculture/CSRS, \$100,000, 8/15/89 to 8/14/91).

Donald G. White, Department of Plant Pathology, "Use of Fungicidal Grain Protectants to Reduce Production Costs and Improve Grain Quality" (Illinois Corn Marketing Board, \$67,815, 8/30/89 to 8/31/90).

Michael A. Cole and Karen K. Leonas, Department of Agronomy, "Effects of Additives on Degradability of Cornstarch-Plastic Composites" (Illinois Corn Marketing Board, \$71,320, 8/31/89 to 8/30/91).

John W. Erdman, Neal R. Merchen, and George C. Fahey, Department of Food Science, "The Pre-Ruminant Calf as a Model for the Study of Human Carotenoid Metabolism" (U.S. Department of Agriculture, \$129,074, 9/1/89 to 8/30/91).

College Launches New Environmental Initiative

UI College of Agriculture dean **W. R. Gomes** has recently announced the establishment of a new collegewide research and educational initiative focusing on environmental issues, with particular emphasis on water quality.

In a May 31st press conference in Springfield, Il., Gomes announced the appointment of **Donald E. Kuhlman**, professor and extension specialist in agricultural entomology, as program leader for environmental issues. Kuhlman will provide leadership for new research and extension programs in water quality, with emphasis on the environmental impact of nutrients and pesticides, including health and safety issues. He also will be responsible for creating and chairing a new College taskforce on water quality, coordinating activities with the College's committee on sustainable agriculture, and chairing the College's agricultural pesticides committee.

In outlining the new program initiative, Gomes stated that, "This action is a clear indication of the College's commitment and concern for environmental issues, especially those pertaining to agricultural pesticides and problems stemming from their use." Noting that "water quality is a major issue in Illinois," Gomes stressed the growing importance of addressing environmental concerns that affect both rural and urban citizens statewide.

The new environmental issues initiative will involve faculty and staff from throughout the College, including both the Illinois Agricultural Experiment Station and the UI Cooperative Extension Service.

AgriView

News items and other articles of interest to the College of Agriculture are solicited on a continuing basis. Submit all materials for possible inclusion in upcoming issues of AgriView to Joanne Courson, Office of the Dean, 101 Mumford Hall. Items may be edited for reasons of space and consistency.

Faculty Awards and Honors

Three distinguished faculty members of the UI College of Agriculture were formally honored March 13 with the Paul A. Funk Recognition Award, the College's highest professional honor.

Funk Award winners for 1989 included Janice M. Bahr, professor of reproductive physiology; David L. Chicoine, professor of taxation and public finance policy; and Toshiro Nishida, professor of nutrition and food chemistry.

Each Funk Award winner received a certificate of recognition, an unrestricted award of \$2,000, and a \$1,000 recurring annual salary increment. In addition, the sum of \$1,000 was presented to the respective academic departments of the awardees to support their future programs and professional activities.

Making the award presentations at the 1989 College of Agriculture recognition awards banquet was W.R. Gomes, dean of the College; and Eugene D. Funk, Jr., representing the Paul A. Funk Foundation.

The prestigious award is annually given by the Funk Foundation of Bloomington, Illinois in recognition of outstanding professional achievements and major contributions to the betterment of agriculture through research, teaching, extension, and public service.

C. Allen Bock, professor of agricultural law extension; and James D. Oliver, associate cooperative Extension director for urban programs, were honored June 8 at the 1989 Consumer and Homemaking Education Program (CHEP) banquet and awards ceremony. Each received the "Friend of CHEP" Award for major contributions to CHEP's educational programs.

Bock was cited for his work with the income-tax education program of CHEP, which has resulted in low-income Illinois citizens receiving more than \$9 million in tax refunds. Oliver was recognized for his special leadership and administrative contributions to CHEP since 1981.

Leslie A. Christiansen, professor of agricultural engineering, was honored with the 1989 Stanley H. Pierce Faculty Award at the 25th annual Engineering Awards Convocation of the UI College of Engineering. Christiansen was one of eight distinguished engineering faculty members honored for outstanding professional achievement at the convocation.

Roger L. Courson, professor and head of the UI Vocational Agriculture Service, was honored June 21 by the Illinois Association of Vocational Agriculture Teachers (IVAT). He received a 35-year Service Award from IVAT.

John W. Courter, professor of fruit and vegetable crops extension, has received a recognition award for superior service in his field from the North American Strawberry Growers Association.

Several Extension youth advisers were honored with professional awards at the 1989 spring meeting of the Illinois Association of Extension Advisers—Youth (IAEAY). Chuck Cunningham, Effingham County, and Betty Gavin, Henry County, received the IAEAY Distinguished Service Award; Judy Bingman, White County, received the Achievement-in-Service Award.

Karen Leavitt Long, Randolph County, was honored with the Outstanding Program Award; and Diane Bechtel, Donald Bergfield, and Pat McGaughlin, Region 5, won the Excellence in Team Programming Award. New Adviser Award winners included Joy Eyman, Fayette County; Martha Moellring, Edgar County; Sandra Wallace, Warren County; and Lisa Woessner, Montgomery County.

Stanley E. Curtis, professor of environmental physiology, was formally honored at the American Society of Animal Sciences 1989 awards banquet as the recipient of this year's Charles A. Black Award. The prestigious award is annually presented by the Council for Agricultural Science and Technology (CAST) for outstanding career contributions in agricultural education and research. The ASAS meeting was held in Lexington, Kentucky in late July.

Philip J. Dziuk, professor emeritus of animal science, is a 1989 recipient of the SSR Distinguished Service Award, sponsored by Serono Laboratories, Inc. The award was presented by the Society for the Study of Reproduction at its annual meeting.



Paul A. Funk Recognition Award recipients for 1989 included College of Agriculture faculty members (left to right) Janice M. Bahr, Toshiro Nishida, and David L. Chicoine. The prestigious award, the College's highest professional honor, recognizes outstanding contributions to the betterment of agriculture.

Faculty Awards and Honors

The Illinois Extension Advisers Association (IEAA) has recently announced several winners in its 1989 Public Information Awards Program. Winners in the Lesco Turfgrass/Horticulture Communications competition included **Michelle Eggerss**, DuPage County; **John Fulton**, Logan County; and **Dennis Thompson**, Champaign County. Thompson also was named the state "Top Entry."

Winners in various categories of the RJR/Nabisco Public Information Awards Program included **Don Teel**, Knox County (radio program); **Ronald Cornwell**, Madison County (news or feature story); **David Robson**, Sangamon County (direct mail piece); **Bryon Kirwan**, Grundy County (personal column); **Dennis Thompson**, Champaign County (feature story); **Stan Eden**, Ogle County (newsletter); and **Richard Hentschel**, Kane County (video/TV).

Three faculty members in the UI Department of Animal Sciences were recognized for outstanding professional achievement at the department's 1989 faculty awards banquet. **Dan B. Faulkner**, assistant professor of beef extension, received the G. R. Carlisle Award for Excellence in Extension Teaching; **Larry L. Berger**, professor of ruminant nutrition, received the H. H. Mitchell Award for Excellence in Graduate Teaching and Research; and **Neal R. Merchen**, associate professor of ruminant nutrition, received the D. E. Becker Award for Excellence in Undergraduate Teaching and Counseling.

Six outstanding faculty members of the UI College of Agriculture were formally recognized at the College's 1989 awards banquet with its Faculty Award for Excellence. A Senior Faculty Award and Young Faculty Award were presented "for outstanding professional achievement and demonstrated excellence" in each of the three categories of extension, research, and teaching.

The 1989 award recipients included **Thomas L. Frey**, professor of agricultural finance (Senior Faculty Award in Extension); **Kevin L. Steffey**, associate professor of agricultural entomology extension (Young Faculty Award in Extension); **Frank J. Stevenson**, professor of soil chemistry (Senior Faculty Award in Research); **Larry L. Berger**, professor of ruminant nutrition (Young Faculty Award in Research); **J. Kent Mitchell**, professor of agricultural engineering (Senior Faculty Award in Teaching); and **M. Allison Carll-White**, assistant professor of interior design (Young Faculty Award in Teaching).

Each received a certificate of recognition and a \$1,000 recurring salary increment. The awards were presented by College dean **W. R. Gomes**.

A team of seven College faculty and staff members were recently recognized with the American Agricultural Economics Association's 1989 "Quality of Communication" Award for their outstanding work in devel-



Six College of Agriculture faculty members received 1989 Faculty Awards for Excellence, recognizing outstanding professional achievements in extension, research, and teaching. Shown at the March 13 presentation at the Illini Union were awardees (left to right) **Larry L. Berger**, **Frank J. Stevenson**, **M. Allison Carll-White**, **Kevin L. Steffey**, **J. Kent Mitchell**, and **Thomas L. Frey**.

oping a conservation systems workshop program that is being used nationwide. Those honored were **Richard Farnsworth**, **Raymond Herman**, **Robert Walker**, **Douglas Petersen**, **Randall McCabe**, **Grear Kimmel**, and **Paula Wheeler**. The award was presented at the 1989 AAEA annual meeting, held at Baton Rouge, Louisiana in early August.

Richard E. Ford, professor and head of the UI Department of Plant Pathology, was formally honored June 3 with an alumni award from Iowa State University.

Daniel Gianola, professor of animal breeding and genetics, received two major awards for outstanding professional achievement at the 1989 annual meetings of the American Dairy Science Association and American Society of Animal Science, held in late July. Gianola was honored with both the ADSA's J.L. Lush Award and the ASAS's Animal Breeding and Genetics Award.

Don W. Graffis, professor of forage crops extension, was recognized with an honorary membership in the Illinois Crop Improvement Association on June 13. Graffis was honored at the ICIA's annual banquet for his dedicated service to the organization and outstanding professional contributions to the seed industry.

Richard L. Bernard, professor emeritus of plant genetics/USDA, also received special recognition at the 1989 ICIA banquet for his many significant contributions to soybean breeding. Bernard has released numerous outstanding soybean cultivars during his years as a plant geneticist with the College and USDA.

Faculty Awards and Honors

Stuart D. Hawbaker, Extension agriculture adviser, Macon County, has been named president-elect of the National Association of County Agricultural Agents and will be formally installed as NACAA president at the association's 1990 national meeting in Seattle, Washington. He served as NACAA vice president for the past year and was editor of the association's proceedings book for the past nine years.

Lowell D. Hill, Laurence J. Norton professor of agricultural marketing, is a recipient of the American Agricultural Economics Association's 1989 Distinguished Extension Program Award for his outstanding extension educational program in grain marketing. Hill was honored for his numerous professional achievements at the 1989 AAEA annual meeting, held at Baton Rouge, Louisiana in early August.

In June, Hill also received the United States Department of Agriculture's highest professional honor, the USDA Distinguished Service Award. The prestigious award recognizes Hill's nearly two decades of work with farmers, educators, industry, and government to improve the accuracy of information provided by grain grades and to facilitate improved grain marketing.

Robert H. Hornbaker, assistant professor and extension specialist in farm management, has been awarded a certificate of commendation for outstanding achievement in the field of water resources. The certificate was presented by the National Association of Water Institute Directors and the National Association of State Universities and Land-Grant Colleges.

Edwin H. Jaster, associate professor of dairy science, has been selected by Alpha Zeta honorary as the 1989 "Outstanding Instructor" in the UI College of Agriculture.

Kay Mayberry, Extension home economics adviser, Gallatin/White Counties, was a second-place winner in the 1989 National Association of Extension Home Economists research and studies abstract contest. Her study on the feelings and attitudes of children toward being alone will be published in *The Reporter*.

Several professional staff members of the Office of Agricultural Communications and Education were honored in July in the 1989 Critique and Awards Program of Agricultural Communicators in Education (ACE). Those recognized included **Randall McCabe** and **Gary Beaumont**, honorable mention in the news class, electronic media; **Vernon Brazle**, honorable mention in the exhibits class, graphic design; and **Randall McCabe**, honorable mention in the promotional production class, communications technology.

Communications specialists **William Creswell** and **R. Grear Kimmel**, together with extension health educa-



College dean **W. R. Gomes** (far right) congratulates **Thomas L. Frey** and **Sara U. Douglas**, winners of the College's 1989 Karl E. Gardner Outstanding Undergraduate Adviser Award. The collegewide award recognizes outstanding achievement in all aspects of undergraduate student advising and counseling.

tion specialist **Joseph Pankau**, won a national award in June for their educational film, "Fitness for Life." The award was presented by the American Society for Healthcare Education and Training.

Graphic design specialist **Paula Wheeler** also was recognized for her design work in a national competition of the In-Plant Management Association. Her design and the UI Office of Printing Services quality of printing earned top honors for *Illinois Research* in the magazine/journal category.

Marjorie E. Mead, acting assistant director in home economics, has been honored by Iowa State University's College of Family and Consumer Sciences with its Professional Achievement Award in Home Economics. The award was presented June 3 at the Iowa State honors and awards convocation.

Sharon Y. Nickols, director of the School of Human Resources and Family Studies, was recently honored as an American Home Economics Association Leader. The association award, which recognizes professional leadership at the state, national, and international levels, was presented at the AHEA annual meeting in Cincinnati.

Four academic professional employees of the UI College of Agriculture were formally honored in mid-March with the College's 1989 Academic Professional Award for Excellence.

The 1989 awardees included **M. Gene Oldham**, agronomist and supervisor of the UI Agronomy/Plant Pathology South Farm; **John W. Santas**, associate director of the UI Office of International Agriculture; **Lynette M. Fournes**, director of the College's Office of Resource Development; and **Michael J. Mainz**, agronomist and

Faculty Awards and Honors

supervisor of the Northwestern Illinois Agricultural Research and Demonstration Center at Monmouth, Illinois.

Oldham and Santas were cited for "sustained excellence and exceptional dedication," while Fournes and Mainz were recognized for "exceptional innovation and creativity." Each received a certificate of recognition and a \$500 annual salary increment.

Donald A. Percival, research professor of wood technology and utilization, and Henry Spies, assistant professor and managing editor in wood technology, have been honored with awards from national research and construction associations.

Percival received the Award of Merit from the American Society for Testing and Materials, and Spies was designated an Honorary Certified Remodeler by the National Association of the Remodeling Industry. Both are longtime staff members of the UI Small Homes Council/Building Research Council. Percival is also a faculty member of the Department of Forestry.

John Quinn, area Extension adviser in community education, CES Region 6, was recently honored with the Community Development Society (CDS) Distinguished Service Award in recognition of his superior service to community development and his outstanding work in advancing CDS. The award was formally presented by the society in July at St. Louis, Missouri.

Mastura Raheel, professor of textile science, was recently recognized with the 1989 Manufactured Fiber Research Award, given at the American Home Economics Association annual meeting in Cincinnati. Raheel was honored for sustained excellence in research on manufactured fibers and their uses in textiles products.

Robert J. Reber, associate professor of nutrition extension, was honored March 13 with the College's 1989 John Clyde and Henrietta Downey Spitler Teaching Award. The award recognizes exemplary performance and exceptional innovation in the broad area of teaching.

Reber received an unrestricted personal award of \$500 and a certificate of recognition.

Ann E. Reisner, assistant professor of agricultural communications, is a recipient of the Arnold O. Beckman Research Award for 1989-90. The prestigious award is given by the Campus Research Board to support research projects of special distinction or exceptional resource value. Reisner will be conducting a comparative study of how liberal and conservative newspapers arrange news stories on newspaper pages.

The Illinois Association of Extension Advisers/Youth (IAEAY) has recognized several county youth advisers with its 1989 Communications Awards. Winners in the



Recipients of the UI College of Agriculture's 1989 Academic Professional Award for Excellence were (left to right) Michael J. Mainz, John W. Santas, Lynette M. Fournes, and M. Gene Oldham.

respective communications categories include Debra Stocker, Clinton County (single news photo); Steve Wagoner, Logan County (radio program, TV program, and feature story); Sandra Lignell, Cook County (educational leaflet); Connie Frederking, Washington County (personal column); Jeannea Shier, McLean County (direct mail piece); Pat Hildebrand, Jasper County (news story); and Diane Bechtel, Ford County (newsletter).

John van Es, professor and extension specialist in rural sociology, was one of ten outstanding UIUC faculty members recognized at the 1989 Campus Instructional Awards Banquet. He was honored with the 1989 UIUC "Excellence in Off-Campus Teaching" Award, which included a \$1,000 stipend and a \$350 grant for improvement of off-campus instruction.

Lloyd M. Wax, professor of plant physiology/USDA, was elected a Fellow of the Weed Science Society of America at its 1989 national meeting in Dallas, Texas. Earl C. Spurier, who earned his Ph.D. degree in the UI department of agronomy in 1956 and served as its first extension weed science specialist, also was elected a WSSA Fellow.

Jack M. Widholm, professor of plant physiology and genetic engineering, was recently elected a Fellow of the American Association for the Advancement of Science. In receiving the AAAS recognition, Widholm was cited for his outstanding professional achievements and significant contributions to science.

Roger R. Yoerger, professor emeritus of agricultural engineering, is a recipient of the 1989 Massey-Ferguson Award given by the American Society of Agricultural Engineers. Yoerger was cited by the ASAE for his "dedication and high standards as an educator."

John Gerber To Lead New Agro-Ecology Program

The UI College of Agriculture is currently launching an integrated, collegewide program in agro-ecology. The primary objective of the new research and educational thrust is to develop sustainable agriculture production systems that are environmentally sound, socially acceptable, and economically competitive.

John M. Gerber, associate professor of horticulture extension, will head a seventeen-member *ad hoc* sustainable agriculture committee from throughout the College. The responsibilities of the committee are to establish new research and extension initiatives that are supportive of sustainable agriculture, to provide collegewide coordination, and to give the agricultural community greater access to sustainable agriculture information.

College faculty have submitted seventeen grant proposals to the North Central Region Low Input/Sustainable Agriculture (LISA) Program to obtain federal funding support for major sustainable agriculture projects. Priority issues for LISA funding include developing economically competitive crop and livestock systems that 1) reduce reliance on off-farm purchased inputs, especially chemical pesticides and fertilizers that may pose environmental or human health risks; 2) maintain or enhance soil productivity; 3) reduce soil erosion and loss of water and nutrients; and 4) minimize environmental contamination and health risks.

Schrader Named WSU Ag Dean

Lawrence E. Schrader, head of the UI agronomy department since 1984, has been appointed dean of the College of Agriculture and Home Economics at Washington State University, Pullman, Washington.

The appointment was effective July 1, 1989, according to the WSU public information office.

Schrader, who is a fellow of the American Society of Agronomy, the Crop Science Society of America, and the American Association for the Advancement of Science, also served as president of the American Society of Plant Physiologist during 1987-88. He is nationally known for his research on carbon and nitrogen metabolism in crop plants.

A search committee for a new UI agronomy head, chaired by associate dean John J. Nicholaides III, has been appointed; and a nationwide search is now underway. Charles M. Brown, emeritus professor of agronomy and longtime associate head of the department, will serve as acting head after Schrader's departure.

Christine Jackson Named OSU Associate Vice-President

Christine A. Jackson, director of budget and resource planning for the UI College of Agriculture since 1985, has left that position to become associate vice-president for budget and planning at Oklahoma State University, Stillwater. Her new appointment was effective June 15.

A 1973 graduate of Hope College, Jackson subsequently earned her master's degree in business administration at Western Michigan University in 1978. Before joining the administrative staff of the UI College of Agriculture, Jackson served as director of budget and fiscal planning at the University of Southern California.

Jackson was honored with the UI College of Agriculture's Academic Professional Award for Excellence in 1988. In receiving the award, she was cited for her outstanding achievements in resource planning and her innovative work in computerizing and modernizing the College's extensive financial operations.



The newly dedicated UI Plant Sciences Laboratory, located just east of Turner Hall (upper right), includes ten environmentally controlled greenhouse ranges, a large plant conservatory, and an ultramodern headhouse. The \$10.5 million research and teaching facility, which is the final project in the Food for Century III capital development program for the Colleges of Agriculture and Veterinary Medicine, houses components of the departments of horticulture, forestry, plant biology, and plant pathology. An additional story on the PSL dedication appears on page five.

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AgriView

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UNIVERSITY OF ILLINOIS

Our Open House gives us in the College of Agriculture an opportunity to put our best foot forward

and present a positive image to thousands of visitors from around the state and across the campus.

When we invite the public to "discover our diversity," we are asking them to examine our facilities and activities and then develop a sense of confidence that the College and our varied programs are valuable and beneficial to Illinois agriculture and the citizens of the state.

Those who may never have visited the College or who haven't been on campus for a number of years may be surprised at the diversity we offer. Our programs in such areas as food science, agricultural

economics and even agricultural engineering, for example, embrace a range of subjects from new uses for traditional farm products to community development and water quality.

The first public tours of the Plant and Animal Biotechnology Laboratory will be a highlight of the Open House. This building is the latest in a long line of examples of how the College has benefited from investments of federal money in the research mission of the University of Illinois. But although our physical facilities have been enhanced, the federal investment in people and programs has not kept pace with increasing costs.

While buildings may be most apparent to many of our visitors, we must help them discover the depth and breadth of our research, teaching and community service programs as well as the talent and dedication of the people responsible. Along with on-campus teaching and research, the scope of this work stretches across the state through the Illinois Cooperative Extension Service.

Two years ago we celebrated the 75th anniversary of the Cooperative Extension Service in the United States. Now, our attention is placed on revitalization — raising Illinois extension's funding to the level necessary to continue providing our state's citizens with the programs they require and expect. To do this, we need to bring our funding requirements to the attention of our new Governor and the State Legislature.

Our financial deficiencies are real. Our loss of buying power in federal funding has put Illinois extension in a difficult financial

position for some time. Now, we're trying to do something about it. Last fall, the University of Illinois Board of Trustees included with their FY 1992 budget request to the Illinois Board of Higher Education an addendum for \$8 million for the Illinois Cooperative Extension Service. That addendum later was included as a recurring \$2 million line item for additional funding in next year's budget proposal from the IBHE. This is less than our original request, but it's a step in the right direction.

Even this increase, however, is not assured. The state budget doesn't promise much room for growth, and the future of this funding request is not secure. We must let extension users across the state know how important this new funding will be for CES and encourage them to contact their state legislators and ask for their support.

Even now, as extension programs are moving into new, non-traditional areas such as solid-waste management and community development, our need to continue serve our traditional clientele continues. Our mission is expanding, but our resources are contracting. Extension is being challenged to provide new educational programs to meet today's needs. Programs addressing water quality, food safety and youth at risk are high on our agenda.

We have an important story to show and tell. And during Open House, we'll have an audience that has *come to us* to see and hear our story. I hope we all take advantage of this occasion — as well as every other opportunity we have — to help our various publics discover the diversity of the College of Agriculture. ▽

• • ***On the cover:** Dan Humburg, a graduate student in agricultural engineering, adjusts a video camera that is filming asparagus inside a box. As the box passes over a row of asparagus, the camera sends images to a computer, which measures the length of each spear to determine which are the optimum length to harvest. When the computer vision program is perfected, Humburg's next step will be to develop robotic picking arms. Humburg is working with John F. Reed in the Department of Agricultural Engineering.*

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News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: AgriView, Office of the Dean, 101 Mumford Hall.

The University of Illinois at Urbana-Champaign is an affirmative action/equal opportunity institution.

This issue is printed on recyclable paper.

Office of Budget and Resource Planning

William D. Adams was named director of budget and resource planning for the College effective February 21, 1990, filling a vacancy created when **Christine A. Jackson** left to become associate vice-president for budget and planning at Oklahoma State University. Adams had served as director, administrative services, at Washington State University, Pullman, Wash. There, he directed and managed the budget preparation, budgeting, and fiscal and personnel operations of the teaching, research and extension divisions of the College of Agriculture and Home Economics.

Department of Animal Sciences

Dennis R. Campion was named head of the Department of Animal Sciences effective January 21, 1990. Campion received his M.S. in 1971 and his Ph.D. in 1973 from the University of Wisconsin. Most recently Midwest area assistant director for the USDA Agricultural Research Service, Campion started with USDA-ARS in 1974 as a research chemist at Clay Center, Neb. In 1976 he moved to the Agricultural Research Center in Athens, Ga., as research physiologist and in 1988 became Midwest area assistant director for USDA-ARS in Peoria, Ill. He succeeds **David H. Baker**, who had been serving as acting head.

Department of Food Science

Bruce M. Chassy was named head of the Department of Food Science beginning September 21, 1989. A former research chemist at the Laboratory of Microbial Ecology at the National Institute of Dental Research, Chassy received his Ph.D. from Cornell in 1965.

He joined the National Institute of Dental Research, National Institutes of Health in 1968 and served in a number of research positions. He also held concurrent appointments with the Albert Einstein Medical Center, Philadelphia, Penn., from 1965 to 1967 and with the Department of Chemistry at American University, Washington, D.C., from 1970 to 1974. He replaces **Arthur J. Siedler**, who served as department head for 18 years before returning to the faculty.

Department of Horticulture

Anton G. Endress, previously assistant chief for planning, Illinois Natural History Survey, was named head of the Department of Horticulture as of January 21, 1990. He earned his M.S. in 1970 and his Ph.D. in 1974 from the University of Iowa. He held several positions in the Department of Biology, University of California, Riverside from 1974 to 1980, when he joined the Illinois Natural History Survey. Endress served as associate botanist from 1980 to 1985 and as head, Section of Botany and Plant Pathology from 1985 to 1989. He replaces **William L. George**, who had been serving as acting head.

Department of Agronomy

Gary H. Heichel was named head of the Department of Agronomy effective April 1, 1990. He succeeds **Charles M. Brown**, who had been serving as acting head since August 21, 1989, when **Lawrence E. Schrader** left the University to become dean of the College of Agriculture and Home Economics at Washington State University, Pullman, Wash. Heichel received his M.S. in 1964 and his Ph.D. in 1968 from Cornell University.

From 1968 to 1976 he held positions in plant physiology with the Connecticut Agricultural Experiment Station. Heichel had been with the USDA-ARS in Minneapolis, Minn., as a plant physiologist since 1976.

Office of Agricultural Entomology

Michael E. Irwin was named head of the Office of Agricultural Entomology as of May 1, 1990, succeeding William G. Ruesink. Irwin received his Ph.D. from the University of California, Riverside in 1971. He has worked in South America and served as senior professional officer of the Natal Museum, Pietermaritzburg, South Africa. He joined the UI faculty in 1974 and has held positions in agricultural entomology, plant pathology, the International Soybean Program (INTSOY) and the Natural History Survey.

Cooperative Extension Service

Donald L. Uchtmann was named director of Cooperative Extension Service and associate dean of the College beginning January 11, 1990. He had been serving as interim director and interim associate dean since September 1, 1988, following the retirement of **William R. Oschwald**. Uchtmann received his J.D. from Cleveland State University in 1974 and his M.A. in economic development at the University of Leeds, Leeds, England. He joined the faculty in the Department of Agricultural Economics in 1974. His extensive extension work focused on continuing education for the practicing bar and agricultural law-related programs for non-lawyers. ▽

Open House

People of all ages and backgrounds

are expected to visit the campus to

"Discover Our Diversity."

The Open House will be an occasion to greet old friends and welcome new ones.

*You can expect to see faculty and staff
from all over the campus, students and
teachers from area schools, prospective
students with their parents and perhaps
a teacher, and scores of area people, as
well as former students who have come
back to see how the College has changed.*

The first open-to-the-public tours of the new Plant and Animal Biotechnology Laboratory (PABL) will be a highlight of the 1991 College of Agriculture Open House, 9 a.m. to 4 p.m. on March 1 and 2.

PABL visitors will have an opportunity to tour a portion of the federally funded, \$30 million, "state-of-the-art" facility that opened in January. They will have a chance to learn about the tools of biotechnology and see laboratories and equipment used in research in tissue culture, gene expression, recombinant DNA, gene transfer, chlorophyll biosynthesis, photosynthesis and genetic engineering of plants and animals.

After a successful inaugural in 1990, the second annual Open House is ready to go. From the smallest child to senior citizens, the College will play host to a variety of people. Some will be quite knowledgeable about the College and some of the exhibits; others will be eager to learn even the most rudimentary facts about the College and its programs.

People of all ages and backgrounds are expected to visit the nine open buildings and more than 85 tours,



Thousands of visitors streamed through the Stock Pavilion in 1990 for the First Annual College of Agriculture Open House. Thousands more are expected this year.

displays, and demonstrations to "Discover Our Diversity." You can expect to see faculty and staff from all over the campus, students and teachers from area schools, prospective students with their parents and perhaps a teacher, and scores of local and area people.

Headquarters will again be in the Stock Pavilion. Assistant Dean **Charles Olson**, co-chair for the Open House, says that displays also will be located in the Agricultural Bioprocess Laboratory, Agricultural Engineering Sciences Building, Wood Engineering Laboratory, Bevier Hall, Turner Hall, Plant Sciences Laboratory and Meat Sciences Laboratory. In one change from last year, Agricultural Economics will be exhibiting in the Agricultural Engineering Sciences Building rather than on the fourth floor of Mumford Hall.

Olson says all departments have worked hard developing exhibits around the theme "Discover our Diversity," and every visitor will be sure to find something of interest. For example:

- *Agricultural Engineering* will feature a machine vision asparagus harvester demonstration where visitors can watch a machine-vision system harvest only the ripe asparagus stalks.
- *The Agricultural Experiment Station* will highlight "Value-Added in Illinois," which will follow Illinois corn through its processing stages and show how making a product in Illinois from Illinois corn adds value

to the corn as compared to selling the raw product. The exhibit will also show how the College is involved in the research, development, production and processing stages. Product samples will be available.

- *Foods and Nutrition* will focus on "Ethnic/American Diets: Are They Healthy?" by examining African-American, Mexican-American, Chinese-American, Korean-American and Native American cookery.
- *Animal Sciences* will host the return of the Chinese pigs to let visitors compare the prolific, centuries-old Chinese pigs with modern American breeds. And in the *Meat Science Laboratory*, guests will be able to tour the meat-processing facility and discover the diversity of new meat products.

If 1990 is any indication, local media — including television and radio crews — will be publicizing the event for days before and will be setting up for live broadcasts during the two days of Open House, according to **Sandra Casserly**, communications specialist in radio and television for the Office of Agricultural Communications and Education and co-chair for the Open House.

"The Open House will be an occasion to greet old friends and welcome new ones," says College Dean **W.R. "Reg" Gomes**. "I hope every member of the College faculty and staff will take this opportunity to help tell our story to a diverse audience."

Because parking in University lots will be restricted to permit holders on Friday, parking will be available in the Assembly Hall lot west of First Street with shuttle-bus service to the Stock Pavilion. Parking will be available on campus on Saturday. During both days, shuttle buses will serve the main buildings of Open House. Food service will also be available in several buildings. ▽



The College's diversity can be seen everywhere — from high-tech robotics to the traditional petting zoo.



Dean Gomes visited China last June to represent the College of Agriculture at the soybean processing and utilization conference co-sponsored by INTSOY.

College Establishes China Connection For Soybean Germplasm Research

An international conference co-sponsored by the International Soybean Program

(INTSOY) and a subsequent visit to the campus by a delegation of Chinese

soybean researchers may be paving the way to closer cooperation between China and the College in soybean research.

INTSOY representatives **Harold Kauffman**, **Karl Weingartner** and **Wilmot Wijeratne** along with Dean **W.R. "Reg" Gomes** attended the conference on soybean processing and utilization in June 1990 in Gongzhuling, Jilin Province, China. The meeting attracted almost 250 soybean scientists and development officials from 27 countries and featured more than 300 new soybean foods along with research sessions, exhibits and trips to processing facilities.

In August, four Chinese soybean researchers visited the UIUC campus as part of a trip to see the latest in U.S. soybean research developments. Part of their interest in visiting the UI was the opportunity to discuss collaborative research on soybean germplasm. As the future home of the National Soybean Research Laboratory, the College is deeply interested in acquiring Chinese germplasm for research.

"We invited the Chinese delegation to visit because it's important that they see our capabilities here," Gomes says. "It reinforces our commitment to cooperation."

Because it's the native home of the soybean, China has a germplasm collection that contains genetic diversity unavailable anywhere else in the world. Their gene bank includes upwards of 22,000 accessions — with at least 17,000 in a central location — that represent the earliest progenitors from the soybean's center of origin. The UI, on the other hand, is the repository of the largest U.S. germplasm collection of about 11,000 accessions, but only 2,500 varieties are directly from China.

The opportunity to conduct collaborative research and share germplasm and processing technology is high in the minds of both China and the U.S.

"We could benefit from working with the Chinese," Kauffman says. "With access to their germplasm collection, we might be able to develop varieties with improved nutrition characteristics for food and feed. But the Chinese cannot commit much money for collaborative research."

Chinese soybean research focuses on varietal development as well as on processing technology. The conference, for example, was held in China so scientists, development workers, government workers and business people from developing countries could see Chinese processing facilities and products firsthand. The emphasis was on how soybeans for human consumption have contributed to the health and economic well-being of the Chinese people.

"There's a growing interest in the U.S. in soybeans as a 'health food,' and we need to look at food-grade soybean products," Kauffman says. "We want to learn from the Chinese how they have been processing and using soybeans for food. And we want to open up doors for long-term cooperation on soybean germplasm."

Thus far, the Chinese have not shared large numbers their germplasm with U.S. researchers. "They don't have adequate funds to produce seeds of many varieties," Kauffman says. "The scientists also must demonstrate to their government leaders that China will benefit from collaboration on soybean research."

The barriers are beginning to come down. Recent efforts by INTSOY staff have developed a feeling of goodwill between Chinese and U.S. scientists that could lead to joint efforts in the future. In the meantime, South American and European interests are working to get access to the Chinese gene bank as well.

"The men in this delegation are spokesmen for leading agricultural and government organizations," Gomes says of the summer's visitors. "We need to develop a positive relationship with them."

"We have an opportunity with the new research lab and the USDA gene bank," Kauffman adds. "We need long-term vision to make cooperation with China a high priority." ▽

When it opened in 1987, it was called the Sponsored Research Incubator Building (SRIB), but it may soon be known as the Technology Commercialization Building (TCB) pending approval by UI administrators and the Board of Trustees. The building in the South Farms area, however, will continue to be home to entrepreneurial enterprises developing technology-based products and services for commercial applications.

"The term 'incubator' doesn't accurately describe the programs that are housed there," says **Donald A. Holt**, director of the Illinois Agricultural Experiment Station and "landlord" for the facility. In fact, most commercial incubators concentrate on market development for companies with products that already exist.

"The SRIB is interested in early-stage research and development," Holt explains. "We house companies that are still in the product-development stage. This is earlier than most commercial incubators."

During the three years it's been in existence, SRIB has been home to companies that have generated research grants of more than \$800,000.

Former tenants include one company that benefited from a research grant from the Illinois Corn Marketing Board and a license from USDA to increase the cornstarch content of biodegradable plastics. The company's interest in biodegradable plastic helped a University researcher obtain a research grant from the ICMB. The company pursued related work in the SRIB until it moved to facilities in Tennessee.

Another former tenant and University faculty member developed a "toxicological hotline" for livestock producers who suspect animal poisoning or chemical contamination. His toxicological consulting firm used SRIB until it grew enough to move elsewhere.

One early tenant required services that were available from the University biotechnology center. SRIB provided access to those services.

One current tenant is Ajinomoto, Inc., a Japanese chemical and food company. The world's largest producer of amino acids, Ajinomoto has established a collaborative relationship with **David H. Baker** in the Department of Animal Sciences to research the use of purified amino acids in animal feeds.

Because a significant portion of Baker's research centers on amino acids, Ajinomoto has awarded him a two-year research grant. In addition, the company has leased space in SRIB for an employee studying market development opportunities.

Identity Preserved Grain Laboratory, another current tenant, is working with the Departments of Agronomy and Agricultural Engineering to develop and market testing procedures for evaluating grain quality. A division of the Illinois Crop Improvement Association, Identity Preserved Grain Laboratory is working in SRIB to help distinguish new hybrids and varieties that can be grown and marketed based on differentiated characteristics identified by these testing procedures.

As successful companies move out of SRIB, new tenants need to be recruited. That's one of the jobs of **M.S. "Scottie" Miller**, assistant to the director of the Experiment Station, and **Ken Harris**, SRIB facility manager. As part of the search for additional tenants, the Experiment Station and SRIB's Community Advisory Board evaluate proposals originating in agriculture and other fields, including engineering, life sciences, and commerce and business administration.

"Our first priority is agriculture," Miller says. "But we want to help commercialize the results of other University of Illinois research when space is available in SRIB."

Miller explains that SRIB is an ideal environment for faculty members who have financial interests outside their University work. Apparent conflicts of interest between faculty members' university work and private work "need to be resolved each time" a program or project is started, Miller says.

"A faculty member can conduct or supervise non-university research in the SRIB," she adds, "and keep that activity separate from his or her University work."

Another potential candidate for SRIB may be an off-campus company involved in a joint project with the University. By establishing a research unit in SRIB, the company can facilitate its relationship with the University.

Locating in SRIB gives researchers the advantage of working to develop new technology-based products and services without having to worry about some of the day-to-day needs of entrepreneurial ventures. For example, SRIB can provide:

- specialized research facilities including a cold room and fume hoods in addition to office and laboratory space;
- access to secretarial, telephone, fax and computer services;
- help with recruiting and hiring employees;
- help in procuring supplies and equipment;
- assistance in developing business plans and establishing accounting procedures

In addition, the SRIB staff can serve as a "clearinghouse" to help tenants identify available University facilities and services and assist in arranging their use.

SRIB is more than simply a building. It's a door to the University and a window to the world for entrepreneurs who want to commercialize technology. ▽

CES Revitalization: Recommendations generated strong

Recent efforts to address the Illinois Cooperative Extension Service (CES) funding problems on a long-term basis and better enable CES to address priority

state problems resulted in a recommendation called "CES 2000: Blueprint for the Twenty-First Century." That recommendation, based on projected funding in 2000, called for major shifts in organizational structure and downsizing with opportunities for local Extension groups to maintain a stronger local presence of CES through increased local support.

As that recommendation developed, CES leaders were examining extension financing in other states to determine what would be necessary to fund a revitalized Illinois CES. The CES 2000 recommendations generated a strong public response. Extension users wanted a stronger local presence and a stronger support base on campus. They urged seeking additional support for CES.

On September 13, 1990, the University of Illinois Board of Trustees sent forward an \$8 million item for CES as an addendum to their FY 92 budget request. As 1991 began, that item, along with the University budget in general, was still under consideration by the Illinois Board of Higher Education. It will next go into the legislative process for consideration.

How Will CES be Different?

Historically, Illinois has maintained offices and staff in each Illinois county. Only six counties have been involved with formal, two-county CES offices. As the buying power of the federal funds continued to decline (\$6 million in the past 10 years with another \$6 million anticipated by 2000), it became evident that existing resources would not support such a structure.

The CES 2000 Taskforce, which delivered its report to Director **Donald L. Uchtmann** June 29, 1990, proposed creating Extension Units (one or more counties per unit) served by specialized staff working in a number of counties but housed in 18 to 22 Extension Centers located throughout the state. With only the existing funding base, the Taskforce determined that Illinois CES could afford 59 Extension Units. With the \$8 million revitalization request, however, as many as 80 Extension Units would be affordable. The revitalization funds would also enable CES to have an increased number of Extension Educators — both in the centers and in the unit offices. It is envisioned that the Extension Units would function as clusters, and each of the clusters would be served by an Extension Center.

The unit/cluster/center structure will provide specialization needed in the field to deal with the high levels of information needed by clientele and will also enable CES to move into program areas that reflect the critical issues high on the State of Illinois' priority list.

On campus, structural changes will not be so evident. But the revitalization request would enable CES to maintain approximately the number of subject-matter specialists that exist today, although there would be changes in their mission and distribution. Without those funds, serious levels of downsizing would be necessary.

What's Been Accomplished So Far, And What's Ahead?

1. Extension Councils throughout Illinois are analyzing cost figures provided staff during a recent series of regional meetings as they assess what county costs will be to maintain single-county unit offices or to work in combination with one or more counties. As those decisions are made, decisions related to cluster formations are also taking place.
2. CES administration has announced an expected — though not final — list of center locations — another piece of information needed to enable Extension Units to see how they best fit into the evolving structure.
3. An interim center has been established as a pilot program at the existing Peoria office. An internal search is underway for an Extension Educator to be housed in the Tazewell unit office if state revitalization funding comes on line or in the center if such funding doesn't evolve.
4. A CES Transition Team representing a cross-section of the organization — and with council representation — has been appointed to provide special advice regarding transition issues and strategies.
5. Department heads, in consultation with CES assistant directors, are reviewing the most-recent recommendations regarding specialist positions and suggesting allocations among issues and departments assuming availability of at least 80 full-time-equivalent (FTE) positions.

public response

6. University and CES administrations have begun discussions with other higher-education "systems" in the state to explore potential partnerships between them and the Cooperative Extension Service.

7. Areas of the state with critical staff shortages have been pinpointed and staffing options have been identified where possible.

8. Staff are being provided information in several areas to expedite the transition process: for example, understanding the political process under which revitalization will take place and analyzing options for increasing local funding.

9. Position descriptions are being developed for all potential CES positions under the revitalization plan, and staff are developing a human-resource audit to help them determine their strengths and potential within the system as it comes into being.

10. Support groups are expressing their support for the need to establish a funding base such as the one requested in the revitalization package. At the early December meeting of the Illinois Farm Bureau, resolutions were passed supporting CES and urging county Farm Bureaus to participate in supporting CES requests locally and at the state level.

There's More to Come

While much remains to be done — and many decisions remain to be made — the revitalization process is very much under way in the Illinois CES. Attention is now focused on Springfield as the University's budget — and the important CES component within it — undergoes the scrutiny of the Governor's staff and, eventually, the legislature.

The CES strategy, however, is to move ahead in ways that are possible — with or without revitalization funding. And a tremendous amount of progress has been made to that end already with more expected as local councils form up their decisions and the new structure begins to take shape. ▽

College Takes Lead In Rural Development Program

- The UI College of Agriculture, through the Department of Agricultural Economics and the Cooperative Extension Service (CES), will be the lead organization in a community development project targeted to rural Illinois counties.

- The three-year project, "Helping Rural Communities Prepare for Economic Development," is supported by Rural Partners, an Illinois coalition for rural community development, with funding from a \$602,000 grant from the W.K. Kellogg Foundation of Battle Creek, Mich.

- The program will be guided by a project advisory committee made up of representatives from Rural Partners who will work closely with CES staff. **Jerry W. Robinson, Jr.**, professor of rural sociology, is project leader.

- "The project advisory committee will choose six counties to participate in the first phase of the program," according to **W.R. "Reg" Gomes**, dean of the College. "Each county selected will be among the most rural in the state, will have a local group willing to sponsor the program, and will have a team of persons to become community coordinators. The program will expand to 12 or more counties later."

- "The self-help approach and technical assistance provided by the project will demonstrate that when local citizens, community groups and state organizations work together, community and economic development is more likely to occur," Robinson says.

- Rural Partners is a group of 120 Illinois business and government agencies. The coalition provides a framework for economic developers and faculty from several state universities to collaborate as they work with local groups to prepare materials and programs. ▽

Memorial Fund Supports Dairy Extension

Recent financial gifts from Helen Scheidenhelm of Sun City, Ariz., have raised the value of the Elmer C. Scheidenhelm Memorial Fund to more than \$30,000. The fund is a charitable trust established by Mrs. Scheidenhelm to honor the memory of her late husband who received a B.S. degree with honors from the UI in 1926.

Mr. Scheidenhelm's 40-year career with the Cooperative Extension Service included serving as Douglas County Extension agent from 1950 to 1953. He also served as extension dairy specialist with the University of Nebraska, Michigan State University, Rutgers University and the University of Kentucky.

Mr. Scheidenhelm was on the approved list of judges for all dairy breeds and served as an official classifier of Brown Swiss cattle. He also wrote the 50-year history of dairy extension work for the golden anniversary issue of the *Journal of Dairy Science*.

Interest income from the fund provides special grants to Illinois extension dairy specialists for professional development and improvement. This life-income trust will also pay Mrs. Scheidenhelm an income throughout her life. At her death, the College will continue to receive a part of the income from the trust each year. ▽

"Changes around the world are having an effect on agriculture in the United States, and those changes are being recognized in the College of Agriculture. It's clear that our U.S. agriculture system must compete in the global

marketplace and that the globalization of our curricula should be an integral part of our land-grant mission," says **William L. George**, associate dean and director of resident instruction.

"Today, the question is no longer 'Should we internationalize the curriculum?'" he adds. "We clearly must. The question is 'How do we do it?'"

Teaching Enhancement Grants

In September, George announced a call for proposals for the Enhancement of Teaching Grant Program supported by funds from the Karl E. Gardner Endowment. The 1990-91 grants will focus on "internationalizing our courses and curricula."

The Gardner endowment, funded by a gift from George R. and Arthur H. Bunn, provides grants of \$500 to \$1,000 to improve and enhance course or other instructional activities affecting undergraduates. Grants were first offered in 1988-89, when 22 proposals were funded in the amount of \$18,900. For 1990-91, George announced 22 awards totaling \$19,197.

"The student population in the College is multicultural in nature," George says. "We must continue to explore ways to further broaden and create cultural awareness among our students and faculty."

"We want to encourage and assist our faculty with their efforts to develop and acquire instructional materials to convey global perspectives wherever possible," he adds. "One way is through this mini-grant teaching enhancement program."

Three Examples

Ann E. Reisner, assistant professor of agricultural communications, teaches "Development Communications." The course deals with different theories of communicating information to farmers and others involved in agriculture in developing countries.

"We start with a historical progression of theories and analyze 'what might be' if countries use those theories to guide their development," she says. "Then we look at case studies."

To broaden the scope of the course, Reisner will use her grant to employ three graduate students, each from a different continent. Students will search the literature for additional publications to enlarge the collection of examples used as case studies.

Theodore Hymowitz, professor of agronomy, is using a grant to reintroduce and revitalize an earlier course, "Crops and Man," that had been taught by professor emeritus **Jack Harlan**.

The new course, "Crops and Society," will deal with where plants come from (their areas of origin), how they have moved about, and who uses them now. The course will also investigate sources of information from early times and include field trips to such places as the World Heritage Museum to examine paintings, archeological items, fossils and other articles for evidence of plants.

Hymowitz expects the junior/senior-level class to have wide appeal. When Harlan taught the course, Hymowitz says, the composition was about half agriculture students with the balance from Liberal Arts and Sciences.

J. Bruce Litchfield, assistant professor in agricultural engineering, is introducing a new course "Food and Process Engineering Design." The food and pharmaceutical industries, he explains, have distinctive equipment, process and facility requirements, such as sanitation, seasonality and sustained production.

Litchfield will use the teaching enhancement grant in the senior- and graduate-level course to gather information on equipment and processes that are especially useful for international applications — primarily in developing countries. At the same time, because design is more advanced in Europe than in the U.S., the course will "look both ways" to see "what we can learn from Europe and what the needs are in developing countries."

There's More to be Done

"We need to develop and proceed with a plan to expose most — or, better yet, all — of our students, not just a select few, to global issues," George says. "Our thrust involves broadening and enriching our students and our faculty in global perspectives."

"Cultural diversity in academia is essential for a well-rounded education," adds **Kandeh Yumkella**, assistant to the dean for minority affairs. "It provides an opportunity for educators and students to analyze different perspectives and viewpoints in intellectual debates. It will promote a more global outlook on political, economic and social issues, rather than the parochial 'American interest' outlook." ▽

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Michael F. Hutjens, professor of animal sciences, received the 1990 Dairy Award from the Illinois Milk Producers Association. The award is based on contributions to the Illinois dairy industry, leadership activities and support of dairy programs. A committee of dairy producers selects the winner. Hutjens is the first non-dairy farmer/agribusiness person selected since the award was initiated in 1985.



The Paul A. Funk Recognition Award recipients for 1990 include (left to right) Robert G. Hoeft, George C. Fahey, Jr. and Michael F. Hutjens.

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William R. Horsfall, retired professor of agricultural entomology, has been selected as the 1990 recipient of the Harry Hoogstraal Medal awarded by the American Committee on Medical Entomology of the American Society of Tropical Medicine and Hygiene. This award is in recognition of his extraordinary contributions to the field of medical entomology.

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Wayne L. Banwart, professor of agronomy, became a Fellow of the American Society of Agronomy in ceremonies held October 24 in San Antonio, Tex.

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William L. Ogren, research leader, USDA and professor of agronomy, received the prestigious Alexander von Humboldt Foundation Award in ceremonies held October 16 at the National Press Club, Washington, D.C. He was selected for his "pioneering research on the biochemistry of photosynthetic CO₂ fixation. . . his elucidation of the role of the rubisco enzyme in the photosynthetic process has been chosen as the most outstanding contribution to agriculture during the past five years." He received an award of \$10,000, a medallion and a certificate.

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Donald A. Holt, associate dean and director of the Agricultural Experiment Station, has been elected President of the Washington, D.C.-based Agricultural Research Institute.

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A leader in animal nutrition research, a scientist whose work has had profound impact on crop production, and a nationally and internationally known dairy educator were honored as 1990 recipients of the Paul A. Funk Recognition Awards, the College's highest professional honor.

The awards were presented to **George C. Fahey Jr.**, professor of animal sciences and nutrition; **Robert G. Hoeft**, professor of agronomy and extension agronomist; and **Michael F. Hutjens**, professor of animal sciences and extension dairy specialist.

Each received a certificate of recognition, an unrestricted personal award of \$2,000, and a recurring annual salary increment of \$1,000. In addition, the sum of \$3,000 was divided by the winners' administrative units to be used by the recipients in support of future programs and professional activities.

Funk awards are presented annually for outstanding professional achievement and major contributions to the betterment of agriculture through research, teaching, extension and public service. The awards are supported by the Paul A. Funk Foundation of Bloomington as a memorial to the late Paul A. Funk, who attended the College as a member of the Class of 1929.

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Walter Splittstoesser, professor of horticulture, was elected as a Fellow of the American Society for Horticultural Science in recognition of his innovative research in horticulture, especially in the area of N metabolism in pumpkins and vegetable crops production; outstanding efforts in undergraduate teaching and in training graduate students; active participation in international horticultural programs; and service to horticultural science.

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Two faculty members were presented Career Awards from the American Society for Horticultural Science. The awards are given for distinguished contributions for a period of ten or more years. **Walter Splittstoesser**, professor of horticulture, was presented the Outstanding Graduate Educator Award for distinguished contributions to graduate education in horticultural science.

John W. Courter, professor of horticulture, was presented the Outstanding Extension Educator Award for exceptional contributions to the profession and science of horticulture, the horticultural industry, and/or home and urban horticulture through innovative extension programs.



Floyd A. Giles is the 1990 recipient of the John Clyde and Henrietta Downey Spitler Teaching Award.



Dean Gomes (center) is pictured with recipients of the College's 1990 Academic Professional Award for Excellence (left to right) Julie Stewart-Haynes, Marilyn Norman, Dianne A. Noland and Charles E. Olson.



James B. Sinclair, professor of plant pathology, was named Honorary Member of the Illinois Crop Improvement Association at their annual meeting, June 1990. Only 32 such honors have been accorded and Sinclair is the first plant pathologist to receive the honor.



John M. Gerber, professor of horticulture and assistant director of the Agricultural Experiment Station, was presented the Illinois Soil and Water Conservation Society Honor Award for a non-member who has provided distinguished service to soil and water conservation in Illinois during 1990. The award was presented at their annual meeting in Champaign on November 9.



Fred Holhubner, Extension field representative and regional director, Region 5, and **Jane Scherer**, coordinator, CHEP and PREP, were presented the Epsilon Sigma Phi State Distinguished Service Awards in 1990. Holhubner was recognized for his significant contributions to Illinois Extension program planning and delivery. Scherer was cited for her leadership in developing educational programs for people in need.



Several Illinois extension advisers were honored at the 1990 National Association of Extension 4-H Agents (NAE4-HA) Conference, November 3-7, the Greenbrier in West Virginia.

Deb Stocker, Clinton County, received the Excellence in Teen Programs individual award.

Jeannea Shier, McLean County, and **David McMurtry**, Kendall County, received the Excellence in Teen Programs multi-county award.

Steve Wagoner, Logan County, received the Communication Award - TV Program.

Lisa McMurtry, Will County, was named NAE4-HA Youth At Risk grant recipient. She is using the \$500 grant to develop a mentoring program for teen mothers.

Denise Kistner, Christian County, and **Linda Kutilek**, Kane County, earned the Illinois Distinguished Service Award.

Jessie Crews, Clark County, received the NAE4-HA Achievement In-Service Award.

William Stone, state specialist emeritus, received the American Spirit Award for Illinois.



Floyd A. Giles, professor of horticulture and Extension specialist, was recognized as the 1990 recipient of the College's John Clyde and Henrietta Downey Spitler Teaching Award. The Spitler awards are presented to individuals in recognition of their achievements in teaching in the College. Mildred Spitler Johnson of Urbana funded the award in honor of her parents. Her father was associate director of Extension when he retired in 1949. The award includes a certificate of recognition and an unrestricted personal award of \$500.



Four academic professionals in the College were honored with 1990 Academic Professional Awards for Excellence. The awards were presented to **Dianne A. Noland**, lecturer, adviser and alumni coordinator in the Department of Horticulture; **Charles E. Olson**, assistant dean in the Office of Resident Instruction; **Marilyn Norman**, Cook County Cooperative Extension Service youth adviser; and **Julie Stewart-Haynes**, research technician in the Department of Animal Sciences. Noland and Olson were honored for sustained excellence; Norman and Stewart-Haynes for innovative and creative programs. Each received a certificate of recognition and an annual, recurring \$500 salary increment.



The 1990 Faculty Awards for Excellence recipients are (left to right) Loren E. Bode, Emerson D. Nafziger, Theodore Hymowitz, Marvin C. Carbonneau and Douglas F. Parrett. John B. Braden was unavailable for the photo.

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Six faculty members were recognized for outstanding professional achievement and demonstrated excellence by the College in 1990. Selected for the awards were **Loren E. Bode**, professor of agricultural engineering, Senior Faculty Award for Excellence in Extension; **Emerson D. Nafziger**, professor of agronomy, Young Faculty Award for Excellence in Extension; **Marvin G. Carbonneau**, professor of horticulture, Senior Faculty Award for Excellence in Teaching; **Douglas F. Parrett**, associate professor of animal sciences, Young Faculty Award for Excellence in Teaching; **Theodore Hymowitz**, professor of agronomy, Senior Faculty Award for Excellence in Research; **John B. Braden**, professor of agricultural economics, Young Faculty Award for Excellence in Research. Each winner received a certificate of recognition and a \$1,000 recurring annual salary increment.

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James R. Roush, professor of agricultural economics, received the 1990 Karl E. Gardner Outstanding Undergraduate Adviser Award in recognition of his achievements in advising students. The award was established by George R. and Arthur H. Bunn of the Bunn-O-Matic Corporation of Springfield to honor Gardner, a former associate dean and director of resident instruction in the College. Roush received \$1,000 and a certificate of recognition.

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Several UI Cooperative Extension Service faculty were honored for outstanding professional achievement and public service during the 1990 CES annual conference. Receiving the CES Award for Sustained Excellence in Programs and Service were **C. Allen Bock**, professor and extension specialist, agricultural law; **Ellen Burton**, extension adviser, home economics, Woodford County; and **Roscoe Randell**, professor and extension specialist, agricultural entomology.

Three individuals and two, two-person teams received CES Awards for Outstanding or Innovative Programming. **Evell Knight**, extension adviser, youth, Cook County, Area II, was recognized for his B.Y.O.B. (Better Your Own Body) program that tackled the problem of youth drug abuse. **Marjorie Sohn**, extension specialist, textiles and clothing, was recognized for her work since 1984 involving teaching and research projects that address concerns related to dermal absorption of pesticides, the role of clothing as a protective barrier, and effective methods of removing pesticide contaminants from clothing. **Laura Wyatt**, extension adviser, horticulture, Winnebago County, was cited for her work with solid-waste recycling and reduction programs.



James R. Roush (left) is pictured with Dean Gomes after receiving the 1990 Karl E. Gardner Outstanding Undergraduate Adviser Award for outstanding achievement in undergraduate student advising and counseling.

The team of **Kathie Brown**, extension adviser, home economics, Warren County, and **Sheryl Hodges**, extension adviser, home economics, Mercer County, was recognized for working with local leaders and citizens in the two counties to initiate a solid-waste management and recycling program for businesses and households. Two Crawford County extension advisers, **Ann Emken**, home economics, and **Larry Wilson**, agriculture, were cited for their team leadership in organizing the first county-wide group dedicated to improving the overall economic climate in Crawford County. ▽

Research programs in the College of Agriculture are enhanced considerably by gifts and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the College, including the following:

Lowell D. Hill, Department of Agricultural Economics, **Marvin R. Paulsen**, Department of Agricultural Engineering, and **Donald G. White**, Department of Plant Pathology: \$25,000 for 12 months from The Andersons Fund for "Moisture Variability in Corn."

David L. Chicoine and **John T. Scott**, Department of Agricultural Economics: \$7,157 for 11 months from the Illinois Department of Revenue for "Farmland Assessment Data/1999."

Steven T. Sonka and **Frederick W. Winter**, Department of Agricultural Economics: \$50,000 from USDA/CSRS for two years for "Enhancing Managerial Education to Attract Young Men and Women to Agribusiness."

Lowell D. Hill, Department of Agricultural Economics: \$48,000 for two years from USDA for "Measuring Costs and Benefits of Cleaning Corn in Domestic and Export Channels."

Gerald L. Riskowski, **Leslie L. Christianson** and **Gwojenn Wu**, Department of Agricultural Engineering: \$14,802 for 12 months from National Pork Producers Council for "Ventilation Fan and Inlet Performance in Realistic Swine Facilities."

Cecil D. Nickell, Department of Agronomy, **Sung M. Lim** and **Lynn E. Gray**, Department of Plant Pathology: \$129,479 for three years from Illinois Soybean Program Operating Board for "Identification of Sudden Death Syndrome Resistance in Soybeans Utilizing in Vitro Methods."

Jack M. Widholm, Department of Agronomy: \$55,443 for three years from Illinois Soybean Program Operating Board for "Development of Tissue Culture Techniques for Soybean Improvement."

Lila O. Vodkin, **Angus G. Hepburn** and **Jack M. Widholm**, Department of Agronomy: \$63,241 for three years from Illinois Soybean Program Operating Board for "Creation of High-Protein Adapted Cultivars by Genetic Engineering."

Theodore Hymowitz, **Lila O. Vodkin** and **Ram J. Singh**, Department of Agronomy: \$156,045 for three years from Illinois Soybean Program Operating Board for "Cytogenetic and Molecular Approaches to Soybean Genome Mapping."

Rex A. Liebl and **Lloyd M. Wax**, Department of Agronomy: \$16,832 for two years from Illinois Soybean Program Operating Board for "Selection of Foliar Spray Adjuvants for Improved Velvetleaf and Common Lambsquarter Control in Soybeans."

Cecil D. Nickell, Department of Agronomy: \$186,671 for three years from Illinois Soybean Program Operating Board for "Improved Soybean Seed Composition and Quality."

Gary E. Pepper, Department of Agronomy: \$4,620 for twelve months from Illinois Soybean Program Operating Board for "Soybean Extension Project."

Robert G. Darmondy, **R.E. Cunker** and **Robert H. Teyker**, Department of Agronomy: \$299,593 for three years from USDA/CSRS for "Prime Farmland Reclamation after Surface Mining."

F. William Simmons and **Charles W. Boast**, Department of Agronomy: \$143,605 for three years from USDA for "Water Flow and Herbicide Transport Through Soil Macropores."

Gary H. Heichel, Department of Agronomy: \$50,000 for twelve months from USDA/SCS for "Nutrient Management Advisor System (NUMAS)."

David L. Thomas et. al., Department of Animal Sciences: \$21,300 for twelve months from Illinois Department of Agriculture for "Cause of the Spider Syndrome in Suffolk Sheep."

Matthew B. Wheeler, Department of Animal Sciences: \$13,500 for 15 months from National Pork Producers Council for "Embryonic Swine."

Lawrence B. Schook, Department of Animal Sciences: \$13,500 for 15 months from National Pork Producers Council for "Mapping Major Genes for Growth and Reproductive Traits in Swine."

Jack Odle, Department of Animal Sciences: \$13,500 for twelve months from National Pork Producers Council for "Enhancement of Medium-Chain Triglyceride Utilization by Neonatal Piglets."

Stanley E. Curtis and **Harold W. Gonyou**, Department of Animal Sciences: \$12,000 for 12 months from National Pork Producers Council for "Pen Shape: Effects on Pig Behavior and Performance."

John F. Reid and **J. Bruce Litchfield**, Department of Agricultural Engineering: \$363,331 for two years from the Biotechnology Research and Development Corporation to fund research on the use of machine vision for monitoring and control of bioprocesses.

Roderick I. Mackie and **Bryan A. White**, Department of Animal Sciences: \$141,465 for two years from Environmental Studies Institute for "Enhanced Biodegradation of Cellulose in Municipal Solid Waste."

Bryan A. White, Department of Animal Sciences: \$125,000 for two years from USDA (competitive grant) for "Enzymatic and Genetic Analysis of Ruminococcus Cellulases."

Walter L. Hurley, Department of Animal Sciences: \$148,748 for three years from USDA/CSRS for "Auto-crine/Paracrine Control of Mammary Lactoferrin During Mastitis."

Harris A. Lewin and **Lawrence B. Schook**, Department of Animal Sciences: \$100,000 for 12 months from USDA/CSRS/CRGO for "Mapping and Polymorphism of Bovine Major Histocompatibility Complex Genes."

Larson B. Dunn, Department of Food Science: \$23,100 for three years from ICMB for "Utilization of Carbohydrates in Phenol-Formaldehyde Wood Adhesives."

Munir Cheryan, Department of Food Science: \$40,700 for two years from Illinois Soybean Program Operating Board for "Fractionation of Soybean Oil by Synthetic Membranes."

Errol Rodda, Department of Agricultural Engineering, and **Alvin I. Nelson**, Department of Food Science: \$46,200 for 12 months from the Illinois Corn Marketing Board for "Non-food Uses of Expanded Corn."

J. Bruce Litchfield and **Marvin R. Paulsen**, Department of Agricultural Engineering: \$25,000 from The Anderson's Foundation for research in "Drying-Induced Quality Degradation in Maize."

J. Bruce Litchfield, Department of Agricultural Engineering, and **Joseph Bentsman** and **Norm Miller**, Department of Mechanical Engineering: \$123,000 for three years from the State of Illinois for "Knowledge-Based Adaptive Control of Dryers."

J. Bruce Litchfield, Department of Agricultural Engineering: \$14,750 from the Campus Research Board for "Transient 3-D Moisture and Structural Changes During Corn Processing Using Magnetic Resonance Microscopy."

Marvin R. Paulsen and **John F. Reid**, Department of Agricultural Engineering: \$64,828 from the Federal Grain Inspection Service for "Machine Vision for Inspection of Corn and Soybean Kernel Quality."

Frederic L. Kolb, Department of Agronomy: \$41,800 from Quaker Oats Company to support the oat breeding program.

Lawrence B. Schook, Harris A. Lewin and David G. McLaren, Department of Animal Sciences: \$250,000 for three years from USDA for "Mapping Major Genes for Growth and Reproductive Traits in Swine."

Donald L. Day, Department of Agricultural Engineering: \$12,500 from the Campus Research Board for "Predicting Desorption Rates of Air Contaminants from Liquid Manure Storage Facilities."

Richard C. Coddington, Department of Agricultural Engineering: \$9,467 from the Campus Research Board for "An Energy Approach to Non-Linear Analysis of Roll-Over Protective Structures."

William H. Peterson and Paul W. Benson, Department of Agricultural Engineering: \$20,000 from the National Food and Energy Council for "Low-Airflow Drying of Fungicide-Treated Shelled Corn to Conserve Energy and Preserve Quality."

J. Kent Mitchell, Department of Agricultural Engineering: \$8,700 from the U.S. Army Construction Engineering Research Laboratory for "Erosion Control Research and Design."

J. Kent Mitchell, Department of Agricultural Engineering: \$53,600 from the U.S. Army Construction Engineering Research Laboratory for "Use of Landfarming to Remediate Soil Contaminated with Pesticides and Fuels."

Michael C. Hirschi, Department of Agricultural Engineering: \$13,300 from the U.S. Army Construction Engineering Research Laboratory for "Erosion Control Research and Design."

Robert A. Aherin, Department of Agricultural Engineering: \$59,000 from the National Institute for Occupational Safety and Health for an "Agricultural Safety and Health Education" grant in conjunction with the Institute of Labor and Industrial Relations, UIUC, and the School of Public Health, UIC.

Loren E. Bode and Jong Rhee, Department of Agricultural Engineering: \$9,475 from the Campus Research Board for "Transport and Deposition of Spray Droplets in a Plant Canopy."

Michael A. Cole, Department of Agronomy: \$8,000 from the Campus Research Board for "Environmental Exposure Sequence and Degradability of Plastics."

La Raw Maran, Department of Agronomy: \$75,000 for 11 months from Soil Conservation Service to create a "Nutrient Management Advisor System."

Wayne L. Banwart, Department of Agronomy: \$150,304 from the U.S. Army Construction Engineering Research Laboratory for "Extraction Techniques and Certification Procedures for Plant Uptake of RDX Residues."

Joseph W. Stucki, Department of Agronomy: \$149,857 for two years from the Environmental Protection Agency for "Oxidation-Reduction Mechanisms in Iron-Bearing Phyllosilicates."

Frederick E. Below, Department of Agronomy: \$32,891 for the first of three years from the Fertilizer Research and Education Council for "Optimizing N Management."

Donald G. Bullock, Department of Agronomy: \$17,006 for the first of three years from the Fertilizer Research and Education Council for "Winter Cover Crops in Summer Feed Grain/Soybean Systems."

Robert G. Hoeft, Department of Agronomy: \$70,000 for the first of three years from the Fertilizer Research and Education Council for "Evaluation of Soil Profile $\text{NO}_3\text{-N}$."

Michael J. Mainz, Department of Agronomy: \$39,004 for the first of three years from the Fertilizer Research and Education Council for "P & K Rates on Soils at the Northwest and Orr Centers."

Lyle E. Paul, Department of Agronomy: \$8,148 for the first of five years from the Fertilizer Research and Education Council for "Nutrient Placement and Movement Under Zero Till."

Theodore R. Peck, Department of Agronomy: \$12,048 for the first of four years from the Fertilizer Research and Education Council for "Spatial Variability as Measured by Soil Tests."

John E. Sawyer and Theodore R. Peck, Department of Agronomy: \$12,030 for the first of three years from the Fertilizer Research and Education Council for "Limestone in No-Till Crop Production."

John E. Sawyer, Department of Agronomy: \$22,400 for the first of three years from the Fertilizer Research and Education Council for "Wheat Response to Sulfur."

Robert H. Teyker, Department of Agronomy: \$38,479 for the first of three years from the Fertilizer Research and Education Council for "Corn Nitrogen Use Efficiency."

Richard M. Vanden Heuvel, Department of Agronomy: \$18,045 for the first of three years from the Fertilizer Research and Education Council for "Methodology to Identify and Quantify Nitrate in Drinking Water Wells."

Robert G. Darmody, Department of Agronomy: \$299,493 for three years from the USDA for "Prime Farmland Reclamation Project."

Thomas J. Bicki, Department of Agronomy, et al.: \$148,988 for 28 months from the Illinois Department of Energy and Natural Resources for "Landfarming to Remediate Soil Contaminated by Pesticide Waste."

F. William Simmons, Department of Agronomy: \$200,000 for five years from the USDA Soil Conservation Service for "Illinois River Sands Water Quality."

Frederic L. Kolb, Department of Agronomy: \$30,125 in a three-year BARD grant totaling \$164,625 for joint research with G. Ladizinsky of the Hebrew University, Jerusalem.

Lila O. Vodkin, Department of Agronomy: \$110,000 for three years from the Plant Growth and Development program of USDA-CSRS.

Lila O. Vodkin, Department of Agronomy: \$97,301 for three years from Pioneer Hi-Bred International for "Molecular Analysis of Mutable Genes in Soybean Lines."

Sharon L. Knight, Department of Horticulture: \$10,200 from the Campus Research Board for "The Combined Effects of Airflow, Velocity, and Pattern on Plant Development in Controlled Environments."

James B. Sinclair, Department of Plant Pathology: \$22,000 from the Illinois Crop Improvement Association to research purple seed stain and leaf spot caused by *Cercospora*.

Adrianna D. Hewings, Department of Plant Pathology, and **Michael E. Irwin** and **Catherine E. Eastman**, Natural History Survey: \$107,000 for two years from the USDA (competitive grant) for "Barley Yellow Dwarf Epidemics: The Role of Intrafield Spread in Oat and Wheat."

Stephen K. Farrand, Department of Plant Pathology: \$100,000 for two years from the USDA (competitive grant) for "*Cis and Trans* Acting Functions Mediating Ti Plasmid Transfer."

S. Safi Korban, Department of Horticulture: \$89,265 for 18 months from Biotechnology Research and Development Corporation (BRDC) for "Genetic Manipulation of Perennial Plant Species."

S. Safi Korban, Department of Horticulture: \$5,000 from Horticultural Research Institute for "Cross Protection of Nursery Plants Against Virus Infection." ▽

A number of long-term construction projects will be completed during 1991 while others are getting started,

according to **Douglas B. Bauling**,

Illinois Agricultural Experiment

Station planning engineer.

The Plant and Animal Biotechnology Laboratory (PABL) is nearing completion, and the first occupants began moving in during December. This federally funded, \$30 million research facility should be fully occupied by the end of February. Furniture, signs and the telecommunications system were installed in December as early occupants — including researchers from animal sciences, the School of Life Sciences and the cell lab — moved in.

The PABL will operate with **Steve Curtis** as facility manager. Curtis, who came from the physics department's Loomis Lab, will be responsible for building operation and maintenance. The laboratory will have a budget to operate and maintain the physical plant and provide for future replacement of fixed equipment.

The addition to the Animal Sciences Laboratory moved past the half way mark at year's end. Although the construction and

renovation project has been complicated by unexpected problems working around occupied areas, Bauling says, completion is expected by late spring.

Architects are currently developing construction documents for the \$5 million National Soybean Research Laboratory to be housed in the soon-to-be-renovated Environmental and Agricultural Sciences Building (formerly the Veterinary Medicine Building). Although funds for the complete project haven't been appropriated by Congress, enough funds are now available to begin removing walls and unusable piping as well as preparing for asbestos abatement. This early demolition, which should begin this spring, will expedite construction bidding by uncovering any hidden "surprises."

Plans are also being drawn up for remodeling part of Bevier Hall. With the advent of space in the Plant and Animal Biotechnology Laboratory, the animal rooms in Bevier will be remodeled into an instruction laboratory. In addition, a tunnel will be built under Gregory Drive between Bevier and the PABL. Work may begin as soon as this summer.

Air-conditioning is being installed in Bevier Hall this winter and spring. The

system is expected to be functioning by summer.

Plans are now being developed for reorganizing Turner Hall. As current projects move to the new PABL, agronomy programs will be consolidated on the lower floors. The vacated portion of the fifth floor will become available for reassignment to the forestry and horticulture departments.

The beef cow facility that was razed for the extension of Windsor Road has been replaced with a new facility that became operational in December. The six small buildings and feedlots cover an area roughly 70 feet by 300 feet. Half of the project is now complete, and the balance will be built later as funds are available.

The Windsor Road improvement project between Race Street and Wright Street was finished last fall except for several hundred feet west of Race. The west leg from Wright Street to First Street will be constructed when funds are available. In addition to the completion of Windsor Road, the project will include improving First Street north of Windsor to the paved area near the State Office Building as well as improving Lincoln Avenue from Hazelwood to Windsor. ▽

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AgriView

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Agriculture is changing. And the changing science of agriculture is changing the face of the College.

But when you think about it, that's how it should be. Our roles are in research, teaching and public service.

Our research leads us to new knowledge, and this new knowledge must bring change.

Look at our campus. The Plant and Animal Biotechnology Laboratory that we're dedicating this fall will allow our scientists to remain at the cutting edge of research. It permits us to bring to one location researchers from a variety of disciplines to work together to solve common problems. The work that will come out of this building could alter the course of human existence forever. It's new. It's different. It's change.

Elsewhere in this issue of *AgriView* is an article about agro-ecology and our program here in the College. This new approach to old issues addresses some of the concerns

of farmers, and it addresses some of the concerns of environmentalists — who may well be farmers, too. It strives to provide new answers and new approaches to problems that concern society. It's new. It's different. It's change.

In another article, Don Uchtmann describes our progress in Revitalization of the Cooperative Extension Service in Illinois. Necessitated by funding shortfalls from the federal government and slowed by the recession's effects on state budgets, CES Revitalization will allow us to best meet changing needs of Illinois citizens while addressing fiscal realities. New approaches. Different responses. Change.

We're looking at things differently than we have in the past. And we must if our programs in agriculture and human sciences are going to survive. . . and thrive.

Our goal, then, should be to blend the results of this new research with the realities of the world to improve the health and well-being of our society. We'll do this through the development of new, improved plant and animal strains as a result of our work in biotechnology. We'll do this through our work in sustainable agriculture — finding new ways to solve old problems without relying on non-renewable resources. And we'll do it through a CES designed to address current, important, changing needs.

The measure of our success, however, will be not only in improving and transmitting technology and research but also in teaching. We must continue to attract and educate the brightest students possible — not only in our undergraduate programs but also in graduate programs that will nurture and develop the intellectual power necessary to sustain our research efforts.

And we must do all we can to continue to educate the general population to changing times through renewed extension programs.

As Bill George leaves his position as director of resident instruction, he's leaving a legacy of change that will continue well into the next century. Our student enrollment is increasing again. We've been successful in recruiting students from urban areas into curricula that are increasingly oriented towards broader definitions of agriculture. And our graduates are enjoying wider choices and higher starting salaries when they leave with a degree. (This is a mixed blessing, because it becomes more difficult to recruit graduates into our advanced degree programs.)

We congratulate Sharon Nickols as she assumes her new position as dean of the College of Family and Consumer Sciences at The University of Georgia. She has been the architect of change in our School of Human Resources and Family Studies during five years of dedicated service. We wish her well as we adjust to the changes her departure will cause. We welcome Don Layman to the position of acting director and look forward to working with him as the search for a new director progresses.

Change is inevitable. How we anticipate change, how we meet change, how we adapt to change will all be measures of our success. If, indeed, we can create rather than react to change, we can continue to progress during unsettled times. ▼

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News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: *AgriView*, Office of the Dean, 101 Mumford Hall.

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- **On the cover:** Allan Kaspar, a junior from Springfield, in a lab in the Plant and Animal Biotechnology Laboratory. Kaspar works with Lawrence B. Schook in the Department of Animal Sciences.

William L. George, associate dean and director of resident instruction since 1984, is returning to the classroom and laboratory. "I'll be teaching freshmen," George says. "We want to take a systems or holistic approach; to get students excited about agriculture."

Along with teaching he'll be returning to research in vegetable genetics and breeding with an emphasis on the application of biotechnology in post-harvest quality. . . after a period of "training to catch up with the latest techniques and technologies."

George feels a strong commitment to undergraduate teaching—a dedication he continued to nurture during his time as director of resident instruction. "We need to convey to potential students what the College is all about — food, agriculture, natural resources, human sciences — and convince them of the career opportunities in the broad system," he says. "The key, now, is to convince students that the curricula are current and forward-looking."

In the 1970s, enrollments were high and students were looking to "feed the world." The culmination of the College's popularity was the Jonathan Baldwin Turner (JBT) Scholarship program. "It improved our ability to recruit quality students," George says.

Now, in the 1990s, students want to "maintain quality of life," and the College is struggling to maintain enrollment. "It looks like we've bottomed out and our enrollments are starting to rise again," George adds. He sees a number of factors contributing to increases in undergraduate enrollment, including: curriculum revitalization that's happening all across campus as well as in the College; teaching development seminars and development grants; undergraduate research opportunities as exemplified by the JBT research program; and minority recruitment and development programs.

"Our programs are dynamic," George says. "They reflect societal and environmental concerns all the way. Now we have to build on where we've been and convey our changing image."



Our students must become more actively involved in their undergraduate educations — become active learners, not passive. We need to educate our students to function in *their* future and not in our past."

"We can offer students outstanding job opportunities," he continues. "But we also have to recruit more of our graduates to continue on for advanced degrees; we need more graduate fellowships and assistantships and higher stipends."

"Demographics are changing," he adds. "We need more emphasis on minorities — pre-college, college and graduate students as well as in our faculty."

Sharon Y. Nickols has resigned as director of the School of Human Resources and Family Studies to become dean of the College of Family and Consumer Sciences at The University of Georgia at Athens as of August 20.

"I've appreciated the opportunity to be at an outstanding university with wonderful standards of excellence," Nickols says of her five years at UI. "I feel this will serve me well as I move to a new administrative position."

Georgia's College of Family and Consumer Science has around 850 undergraduates and 100 graduate students. (HRFS has about 625 undergraduates and 80 graduate students.) Through associations with CES and AES, Nickols will be a member of the College of Agriculture and Environmental Sciences Dean's Council.



Nickols says the administrator's role in faculty and student development gives her a great deal of satisfaction. For example, more SHRFS faculty received national, professional association and college awards during the past five years that ever before. "I'm very proud for the faculty that these have happened," she says. She is also pleased with the four-year-old grant program that has provided five to six graduate students with summer research opportunities funded by the Home Economics Development Fund. "I hope to replicate the program in Georgia," she says.

"Some may think it's peculiar, but I'll miss the Illinois landscape," she says. A Kansas native, Nickols completed her B.S. at Kansas State University in 1965, her M.A. at Columbia University in 1967, and her Ph.D. at the University of Missouri in 1976.

Nickols taught at Culver-Stockton College and then directed the Family-to-Family Project for the Christian Church (Disciples of Christ) in central Missouri. In 1976 she joined the faculty at Oklahoma State University and spent a sabbatical year as a Fulbright Lecturer at the University of Malawi. Nickols has published and lectured extensively in the areas of family resource management and time allocation. Her many honors include delivering the Commemorative Lecture (supported by Kraft, Inc.) at the 1988 American Home Economics Association annual meeting and being one of six AHEA Leaders in 1989. ▼



PABL Dedication Set

Nearly three years to the day from the groundbreaking, the Plant and Animal Biotechnology Laboratory (PABL) on the UI campus will be dedicated on Saturday, September 21, at the northeast corner of Goodwin Avenue and Gregory Drive. The \$30 million facility was built through the cooperative efforts of the College, the University, the State of Illinois and the federal government.

Particular assistance came from three area congressmen — Terry Bruce, Richard Durbin and Edward Madigan, who is now Secretary of Agriculture.



Three years ago, it was open space (across the street south of Freer Hall). Today, it's the Plant and Animal Biotechnology Laboratory (top of page).

The PABL is one of the largest research facilities on campus. With more than 100,000 square feet of working space, it is home to more than 40 research programs in agriculture, veterinary medicine and the life sciences.

"This facility is a clear demonstration of the forward-looking commitment of our federal and state leaders to meeting the problems of the 21st Century," says Dean **W.R. "Reg" Gomes**. "It also represents recognition of the leading role both the University and the College play in basic research."

Researchers began moving into the PABL last December, and the building is fully occupied, according to **Douglas B. Bauling**, planning engineer with the Illinois Agricultural Experiment Station.

In addition to providing space for new programs, the PABL brought together in one location a number of related research projects that had been scattered among other campus locations. In addition to UI programs, it also houses USDA researchers.

"By bringing researchers with different specialties together in one location, we can focus the great intellectual resources of the University of Illinois on fundamental human needs," Gomes says. "These include safe, high-quality, affordable agricultural products; a clean environment; well-managed natural resources; and sustainable agricultural systems."

Invited guests for the dedication include Governor James Edgar, Secretary of Agriculture Madigan, Rep. E (Kika) de la Garza of Texas, chairman of the House Agriculture Committee, Rep. Jamie Whitten of Mississippi, chairman of the House Agricultural Appropriations Committee, and Congressmen Bruce and Durbin. In addition, Illinois Director of Agriculture Rebecca Doyle and former dean John Campbell have been invited to join University and Campus administrators at the event.

PABL will be open for tours from 11 a.m. to 1 p.m. following the ceremony. Later in the afternoon, the Fighting Illini will square off against the University of Houston in Memorial Stadium. ▼

"**A**gro-ecology is the marriage of agriculture and ecology," says **John M. Gerber**, assistant director of the Agricultural Experiment Station. "The focus of the agro-ecology program at the University of Illinois is to develop an awareness of environmental concerns throughout the College of Agriculture. We chose to bring this awareness to the faculty through the science of ecology."

The 30-year-old science of ecology deals with "systems" and complex, long-term considerations rather than with well-coupled, cause-and-effect, short-term relationships.

"For example," Gerber says, "Agriculturalists look at nitrogen application in a cause-and-effect scenario close in space and time — you apply N in the spring and see a yield increase in the fall. An ecologist, on the other hand, looks at the long-term, off-site effects and sees nitrates in the ground water. There may not be a measurable cause-and-effect relationship, but the nitrates *may* have come from fertilizer application."

Gerber says the purpose of the UI agro-ecology program is to identify, prioritize and address the ecological issues facing agriculture. Two have been identified as *environmental degradation* and *dependence on non-renewable resources*.

"Agro-ecology doesn't overlook the necessity of profitability in agricultural production," Gerber emphasizes. "But it includes the concept of sustainability. Agro-ecology can be a catalyst to reduce constraints and to help assure that agricultural research serves a social need as well as a production need."

The UI agro-ecology program is the first in a land-grant institution and only the second in the country. The College chose to integrate sustainability throughout the entire organization rather than establish an "institute" or a "center," which may create "divisions we don't want to see," Gerber says.

"An objective is to establish ecology as a 'subset' of agriculture," Gerber adds. "The College needs both the 'will' and the 'way' to establish ecology in the curriculum. The 'will' will result when the science of agriculture considers the long-term effects as well as the short-term effects. The 'way' is agro-ecology."

The agro-ecology program itself may diminish in favor of agro-ecology courses distributed throughout all the departments in the college. Research has already started in various departments, including agronomy and horticulture. The work may not be specifically identified as "agro-ecology" or sustainable agriculture, but the result will benefit those areas.

"We're looking for the future growth and evolution of agricultural science to include agro-ecology," Gerber says. It likely will at UI. ▼

The UI agro-ecology program currently includes:

- Attending and conducting meetings and seminars
- Encouraging faculty to apply for grants and other sources of seed money to support agro-ecology research
- Constituting a part of the national initiative in agro-ecology
- Publishing a quarterly newsletter and a series of issue papers

Experiment Station Sponsors Ethanol Conference

A three-day conference co-sponsored by the Illinois Agricultural Experiment Station, the National Center for Agricultural Utilization Research, and the Iowa State University Agriculture and Home Economics Experiment Station drew 160 representatives from every aspect of corn utilization to Peoria on May 19-21.

"Corn-Derived Ethanol: Removing Technological Constraints" focused on five usage areas: milling, fermentation, dehydration, co-products and utilization. **M.E. Tumbleson**, assistant director of the experiment station, served as conference convener, and the conference was coordinated by **Mary Scott Miller**, assistant to the director of the experiment station.

College participants in the program included **Steven R. Eckhoff**, associate professor, **Carroll E. Goering**, professor, and **Eugene J. Fox** and **Chia-Chieh Tso**, graduate students, Department of Agricultural Engineering; **Sorab P. Mistry**, professor, Department of Animal Sciences; **Munir Cheryan**, professor, **Sarad K. Parekh**, research associate, and **Adie Mannheim**, graduate student, Department of Food Science.

Plenary speakers were Sen. Paul Simon of Illinois; Charles Hess, assistant secretary of science and education, USDA; Rebecca Doyle, Illinois director of agriculture; and Mitch Beaver of the Illinois Department of Energy and Natural Resources. ▼



Bread tumbles from

an automated, high-

temperature oven

similar to modern

pizzeria ovens.

Enriching this bread

with high-protein soy

flour is one of the

objectives of

INTSOY's proposed

project in Egypt.

Collaboration with Egypt Proposed

Enriching diets in North Africa and the Middle East with soy foods is the goal of a proposed long-term research and development project in Egypt by the College's International Soybean Program (INTSOY). An INTSOY grant proposal submitted to the U.S. Agency for International Development (USAID) seeks \$1.3 million to support a three-year program to develop new soybean products and markets in Egypt. If approved, the grant would fund cooperative research between the UI and the Central Laboratory for Agro-Industries of the Agricultural Research Center in Egypt.

"Our goal," says INTSOY director Harold Kauffman, "is to find ways to incorporate soy products into the Egyptian diet. They currently consume a lot of wheat. We want to look at fortifying that wheat with soy protein."

Feeding a Growing Population

Egypt's 56 million people are supported by only 6 million cultivated acres along the Nile River. Egyptians are acquainted with soybeans since they've grown them for the past two decades on approximately 100,000 acres — about one-third the soybean area of Champaign County. They currently produce about 25 percent of their needs, but imports will grow because there's little room for expansion. To feed its growing population, Egypt is currently the largest recipient of U.S. food aid — mostly wheat — through the PL-480 Food for Peace program.

Integrating high-protein soy flour into traditional Egyptian foods could provide products with high nutritional value

especially beneficial to low-income groups. In addition, feed-grade soybean meal would meet rapidly expanding domestic demands in the poultry industry.

The INTSOY project would include a pilot soybean processing plant in Egypt to produce food and feed products by using low-cost extrusion and mechanical expelling technology to produce high-quality edible oil and high-protein meal.

Partnership with Private Industry

One goal of this project is to encourage private U.S. processing companies to become involved in promoting the increased use of soy products in food and feed in Egypt.

"The country's population is growing so fast, they're going to have to meet their increasing protein needs with soybeans," Kauffman explains. "And it's going to take a major input from the private sector to make this happen."

Serving a Wider Public

Kauffman sees the INTSOY project in Egypt as a first step in a wider-ranging process of using soybeans to improve diets and increase the availability of food in the Middle East and North Africa.

"Egypt is a natural place to set up a regional soybean research program for the entire Arab world," he says. "They have highly educated people and a sophisticated university system. They already provide assistance through a variety of means to other countries in the region." ▼

Revitalization of the Illinois Cooperative Extension Service is an exciting phenomenon and is well underway. Revitalization goals are to make extension financially sustainable, more responsive to the identified needs of Illinois citizens, and more professionally satisfying for CES staff. A long series of budget cuts has significantly impaired CES's ability to accomplish its mission, placed unsustainable workloads on many CES staff, and made it difficult for CES to adapt to its ever-changing environment.

. . . in Funding

Extension has a multi-year goal of increasing annual funding by \$10 million (in 1991 dollars). This would bring combined state/local taxpayer support from about 50% to about 70% of the funding levels of nearby states when measured against comparable factors. In Illinois, the state and local partners have historically funded extension in a 4 to 1 ratio, which is the target for the new funding. The General Assembly is being challenged to provide 80% of the new funding, and local governments are being challenged to provide 20%.

In spite of an incredibly tight budget year, extension was able to secure a first installment of state revitalization funding for the fiscal year beginning July 1. Extension's budget received an increase of \$750,000 to match locally raised funds supporting local extension units. Although short of the \$2.75 million increase requested by the Board of Higher Education, the appropriation of the \$750,000 is something of a miracle when viewed in the context of the difficult budget decisions faced by the General Assembly. Credit for this progress goes to the UI president and board of trustees, the general assembly (particularly Senators Maitland and Demuzio, who sponsored a key amendment), the governor, and the hundreds of Illinois citizens who encouraged their legislators to support extension in any way possible this year.

Progress on local funding is also significant — up approximately 15% from the previous year. In addition, nearly 30 counties plan referenda on extension funding in November. Clearly Illinois citizens want a strong, viable extension program, and they are expressing the willingness to provide a reasonable level of public financial support.

. . . in Developing the Local Presence

The building blocks of the state-wide presence of CES are the county or multi-county extension units. Last winter, each local extension council was asked to decide whether it wanted to recommend a single or multi-county extension unit, the nature of staffing desired for the unit, and with which center for priority issues and program support it wished to be associated.

Local extension councils, assisted by professional staff and regional directors, worked diligently to explore a wide range of possibilities, and about 90% of the counties have been able to formulate recommendations. About 75 separate extension units have been recommended, some 60 of which would be single county units. The remaining units will be made up of about 40 counties which prefer to be multi-county units. Most of these will be two counties forming a single unit. A number of counties indicated their preferences could depend on the outcome of November referenda.

. . . in Personnel Matters

On the basis of these recommendations, searches for unit leaders are underway. Extension plans to have unit leaders hired for a majority of these units early in 1992. Additional professional staff will be hired in some of the units which have opted for more elaborate unit staffing. Of course, the local costs of these more elaborate staffing plans are higher, but the additional local support can be matched with state dollars.

The most important personnel questions are: who will be the 150 extension

educators and when will they be brought "on line"? Applications for the extension educator positions in Springfield, Grayslake in Lake County, and DuPage County were due in early July, and we will extend offers as soon as possible. These three support centers should be "up and running" this fall.

Searches for the remaining extension educator positions will be carried out this fall. We hope to identify the successful candidates for these positions early in 1992. The speed at which the remaining 18 extension centers come "on line" will vary, but we expect most by July 1, 1993. Many will probably come on line before that date.

People selected as extension educators early in 1992 will begin their new responsibilities soon after they are identified, even though the actual support center may not come on line immediately. Our experience with a pilot effort in Peoria, Woodford, and Tazewell Counties suggests that professionals can begin to carry out extension educator roles even before their center for priority issues and program support is activated.

Because of budget limitations, almost all of the searches now under way or soon to be initiated are limited to applicants already on the CES payroll. We want to utilize our existing personnel as effectively as possible before we incur the new budget obligation of outside hiring.

. . . in Implementing Program Initiatives

In a programmatic sense, the most important step for CES is hiring people into the new field positions. This is occurring in all programmatic areas of CES.

A special initiative in the two areas identified for special emphasis is our new Challenge Grant program. CES has worked hard to set aside modest sums to fund the most exciting

continued on page 14

In this era of high technology and immediate information, teaching students with and about computers has high priority in the College of Agriculture.

"Even in times of budget constraints, we need to keep our students' computer knowledge as current as possible," says **W.R. "Reg" Gomes**, dean of the College.



Jeana McAllister, assistant director of the office of computing services, in the micro-computer laboratory that's the heart of the College's computer teaching program.

Undergraduate computer education in the College dates back to 1982 when the Microcomputer Center was established in Bevier Hall with ten Apple II computers from the Department of Agricultural Economics. It now features over two dozen IBM machines.

In 1985 the College added the High Tech IBM Lab when IBM funded projects all across campus and the College "networked" a classroom for teaching. A third group of computers — Apple Macintoshes this time — was added in 1989.

"We have the makings of one of the best college-based computer facilities in the country," says **William L. George**, associate dean and director of resident instruction.

The Microcomputer Center and the High Tech IBM Lab moved to the Ornamental Horticulture Building in 1988 when a grant from the Student Computer Fee fund was used to remodel the building and purchase 10 new computers. This year, 23 Macintosh computers were also moved in.

Teaching Essential Skills

"The Microcomputer Center is used primarily for teaching Ag Econ 161," says **Jeana McAllister**, assistant director of the College's office of computing services and lecturer in agricultural economics, who teaches four sections of the class. Ag Econ 161 serves 300 students — about 60 percent from the College. It includes two hours of class per week plus laboratory work that students do on their own.

"It's an introduction to computer use," McAllister explains. "We teach what computers are and how they're used. We focus on software, featuring Wordperfect and Lotus 1-2-3 along with some dBase III and Harvard Graphics. The course is taught in the Microcomputer Center exclusively on IBM machines. We give priority to ag students with emphasis on freshmen and sophomores."

"Some departments require the class," she adds. "We'd like to see it a required ag course. If all ag students have a computer course in their freshman or sophomore year, the faculty could expect competence and assign appropriate work."

Enhancing Teaching Effectiveness

Unlike the Microcomputer Center, the High Tech IBM Lab allows all students to use the same software from the network server. The room is configured so instructors can move among student work stations and see what's happening. "It's a teaching tool," says **Don Meyer**, network administrator. "A faculty member can use it for as few as one or two sessions during a semester or as often as weekly."

The High Tech IBM Lab gives everyone access to data sets on the network server, and the instructor can use the data with shared-application software, Meyer explains. The network is connected to the campus backbone so data can be downloaded from almost any mainframe on campus. Last spring the High Tech IBM Lab received College funds to replace 20 older computers and upgrade to a faster network.

The new Mac Lab with 23 computers is primarily used for teaching a computer aided design (CAD) course in Interior Design. It's also used for self-study programs utilizing Hypercard.

Along with undergraduate teaching, the Computing Facility also offers software application seminars to faculty, staff and graduate students. During the academic year the computers are available from 8 a.m. to 10 p.m. Monday through Thursday and 8 a.m. to 5 p.m. on Friday except when classes are in session.

McAllister emphasizes that the Computing Facility is available to all students on campus with priority given to students in the College. She adds that "open lab" hours are always posted at least a week in advance.

Ag Econ Uses Computers for Homework

Gerald C. Nelson and **Wesley D. Seitz** in the Department of Agricultural Economics have produced computer-aided instructional

Rep. Durbin Visits Campus

software using Macintosh computers and Hypercard. They started developing the software in the summer of 1988 and began using it that fall to teach Ag Econ 100, which serves 250 to 300 students each year.

All topics covered in Ag Econ 100 are included in the program, and students use the computer for review. Hypercard allows students to select the topics they want to study and interact with the material they're working with. "It's much more than just 'page turning,'" Nelson says.

The software includes all homework assignments for the course. "With the power of the computer, we can give each student a different set of homework exercises," Nelson says. "A student can re-work the assignment until it's all right."

"Computerized instruction is particularly good for people who learn by 'playing with' concepts," Nelson says. "Hypercard allows students to manipulate the material until they understand it."

Nelson also developed computer materials for lectures and uses them in the classroom. The software he and Seitz developed is being used at Notre Dame and Cornell as well as being offered commercially.

Programming Class Uses IBM Lab

Thomas W. Fermanian teaches "Knowledge-based Systems for Agriculture," a computer programming class offered in the Department of Horticulture. Part of his instruction takes place in the High Tech IBM Lab.

"I use the network to some degree," he says. "I'll spend the first part of the class session demonstrating a concept, and the students use the balance of the class time to practice with the program."

Fermanian uses a lecture format for most of the class sessions and moves to the High Tech IBM Lab about "10 to 20 percent of the time" to teach specific programming techniques. "I'll set up a brief exercise to introduce a new concept," Fermanian says of his use of the High Tech IBM Lab. "We use the computer as a supplement." ▼

A half-day tour of College facilities on March 26 left U.S. Rep. Richard Durbin of Springfield with first-hand evidence of how the College uses federal funds. A member of the House Appropriations Committee, Durbin has played a key role in supporting a number of UI projects. His tour was conducted by Dean **W.R. "Reg" Gomes** and **Donald A. Holt**, director of the Agricultural Experiment Station.

Durbin's tour included a visit to the International Soybean Program (INTSOY) where **Bruce M. Chassey**, head of the Department of Food Sciences, and **Robert J. Wynstra**, of the Office of Agricultural Communications and Education, described research funded through the Agency for International Development to develop new soybean products.

The Plant and Animal Sciences Biotechnology Laboratory was a major stop on the tour. "Seven years ago, College representatives approached me and others with a bold idea for a national biotechnology research center," Durbin recalled. "It is exciting to consider the tremendous research potential of the center and how it can improve the lives of so many people here and around the world."

Holt described the National Soybean Research Laboratory as an effort to target soybean varieties to specific needs. Work has begun to house the laboratory in the Environmental and Agricultural Science Building.

Durbin also visited **Alan L. Kriz**, Department of Agronomy, and **Donald G. White**, Department of Plant Pathology, who are working on aflatoxin-resistant corn, and **Donald E. Kuhlman**, Experiment Station program leader for environmental issues, who discussed water quality research.

"It was good to see our federal research dollars at work," Durbin said. "Projects like the National Soybean Research Laboratory and aflatoxin-resistant corn are very promising and need continued funding." ▼

Wilmot B. Wijeratne,

associate director of

INTSOY, (left) explains

soybean processing

equipment to Rep.

Richard Durbin (second

from left) and his admini-

strative assistant, Mike

Daly. William D. Savage,

research associate in food

science, is at the far right.



Internationalization of the agriculture curriculum took a new turn during spring break this year when

Duane E. Erickson, professor of farm management in the Department of Agricultural Economics,



Ten College students and their extension guides pose for a photograph in the tropical rain forest on the island of St. Lucia during their spring break study tour of the Caribbean.

led a group of 10 students on a tour of agriculture in the Caribbean. The idea for the week-long trip was born three years ago when Erickson finished a year's assignment with the MUCIA Caribbean Agricultural Extension Project.

"When I returned from a year in the Caribbean I thought a farmer group or a student group would benefit from seeing how agriculture works in other parts of the world," Erickson says.

"I've been talking with farmers about the trip, but a group hasn't materialized," he adds. "I'm keeping a list of those who have expressed interest, though, and hope to put together a group soon."

The student group arose in the same manner — talking with classes and other groups about the possibility of a trip and then keeping a list of interested individuals. When enough students responded, the trip was on.

Also on the trip were Erickson's wife, Phyllis, and **William L. George**, associate dean and director of resident instruction, and his wife, Marilyn.

After starting in San Juan, Puerto Rico, the group visited Trinidad, St. Vincent, Bequia and St. Lucia. In addition to typical "tourist" venues and activities, the students visited a variety of agricultural facilities. Arrangements were made through individuals Erickson met during his CAEP work.

Erickson explains that much of what the group did and saw was different from what a typical tourist would experience. "There was probably some 'culture shock' for the students," he says. "None had ever been out of the country before."

"Trinidad provided the students an excellent opportunity to interact with students and staff from the University of the West Indies," Erickson adds. "The UWI staff provided a cultural event one evening and presented a seminar the next day."

A highlight of the trip was a visit to the sugar cane research center in Trinidad. Erickson explains the students were a little surprised to see the cattle, sheep and goats, which are used to study the use of sugar cane by-products as livestock feed. The center includes an aquaculture project with armored catfish and tilapia, a tropical freshwater fish resembling sunfish, that are raised for food.

On St. Vincent the group toured with an extension worker who took them through banana plantations and to a banana packing warehouse. On St. Lucia they visited the Inter-American Institute for Cooperation on Agriculture. IICA was created in 1942 and serves to "encourage, promote and support the efforts of the [31] member states to achieve their agricultural development and rural welfare."

Dr. Dunstan Campbell, CAEP leader for windward islands, provided a briefing on the ongoing educational activities with farmers in Dominica, Grenada, St. Lucia and St. Vincent.

Erickson explains the students were surprised to learn that nearly every extension research farm has propagation plots where new varieties of cultivars are evaluated for improvements and sold to farmers at nominal cost.

Pre-trip research, study during the trip, and a post-trip paper earned the students one or two hours credit in Ag Econ 200. ▼

• • •
Larry L. Berger, professor of animal sciences, **Theodore Hymowitz**, professor of agronomy, and **Steven T. Sonka**, professor of agricultural economics, received 1991 Paul A. Funk Recognition Awards, the College's highest professional honor.

Presented annually for outstanding professional achievement and major contributions to the betterment of agriculture, the Funk Awards are supported by the Paul A. Funk Foundation of Bloomington, Ill., as a memorial to the late Paul A. Funk, who attended the College as a member of the Class of 1929.

A leading scientist in the area of protein nutrition of ruminant animals, Berger has significantly influenced the livestock industry. His research with soy protein has led to more efficient utilization of soybean meal, and his work with wet corn gluten feed was instrumental in tripling domestic utilization.

Hymowitz has been internationally acclaimed for his pioneering research on soybean genetics, for his leadership in mapping soybean genes, and for his tireless exploration for the wild relatives of the domestic soybean. He was the first to report a method that is now the standard for analyzing protein and oil content of grain and forage crops.

Sonka was cited for his professional "contributions of high-quality research and educational excellence to agriculture in Illinois and the United States." He and his collaborators have combined sophisticated models from biology and economics to evaluate how climate information influences farm decision making. He has also investigated the relationship between managerial performance, farm income and farm growth.

Each award includes an unrestricted personal award of \$2,000, a recurring annual salary increment of \$1,000, and a certificate of recognition. The winners' departments or units also divide \$3,000 to be used by the recipients in support of future programs and professional activities.



Dean Gomes (left) with the 1991 Paul A. Funk Recognition Award winners (beginning second from left to right) Steven T. Sonka, Theodore Hymowitz and Larry L. Berger.

• • •
Daniel B. Meador, professor emeritus, Department of Horticulture, was presented the 1991 Hall of Fame Award by the Illinois State Horticultural Society for "distinguished service to the Illinois fruit industry" at its annual meeting in Springfield, Jan. 23.

• • •
Dianne A. Noland, Department of Horticulture, was granted membership in Redbook Master Consultants, an association organized to advance and improve the floral industry through needed and affordable educational programs to floral shop employees in the U.S. and Canada.

• • •
Dan B. Faulkner, Department of Animal Sciences, was named ASAS Outstanding Young Extension-Industry Specialist at the Midwest American Society of Animal Science/American Dairy Science Association meetings held in Des Moines.

• • •
Thomas L. Frey, Department of Agricultural Economics, was awarded the first Oakley-Kunde Award for Excellence in Undergraduate Education. The campus-wide award is designed to reward excellence of various kinds within the broad area of undergraduate education. Frey's recognition for excellence in academic advising includes a \$2,000 award.

• • •
James E. Nugent, area communications adviser with the Cooperative Extension Service, designed and constructed an exhibit that was selected as a first-place winner in the Agricultural Communicators in Education annual critique and awards program. Costing less than \$100 to make and weighing less than five pounds, the exhibit can be used on a table top or hung on a wall.

• • •
John W. Dudley, Department of Agronomy, was elected to the rank of Fellow of the American Association for the Advancement of Science in February. The citation that accompanied his nomination read: "For developing and applying quantitative genetic theory to plant breeding, such as inbreeding theory in autotetraploids, interpretation of results of long-term selection in maize, and selecting parents to improve corn hybrids."

• • •
Three members of the Department of Animal Sciences were presented the following departmental awards in April: **Jimmy H. Clark**, the H.H. Mitchell Award for Excellence in Graduate Teaching and Research; **Floyd K. McKeith**, the G.R. Carlisle Award for Excellence in Extension Teaching; **Michael Grossman**, the D.E. Becker Award for Excellence in Undergraduate Teaching and Counseling.



Donald G. White, winner of the John Clyde and Henrietta Downey Spitler Teaching Award.



Donald G. White, associate professor of plant pathology, was presented the John Clyde and Henrietta Downey Spitler Teaching Award. The award was established by Mildred Spitler Johnson of Urbana in honor of her parents. Her father was associate director of extension at the UI when he retired in 1949. The award included a certificate of recognition and \$500. White was cited for his "enthusiasm for the subject, genuine interest in the professional and personal well-being of students, clarity of presentation and organization of materials, and the use of humor to stimulate interest."



Six members of the College faculty were presented Faculty Awards for Excellence at the College's annual recognition banquet. The awards, which include a certificate of recognition and a \$1,000 recurring annual salary increment, recognize outstanding professional achievement and demonstrated excellence in teaching, research or extension.

C. Allen Bock, professor of agricultural law, received the Senior Faculty Award for Excellence in Extension. A nationally recognized expert on federal agricultural income taxation, Bock has helped shape federal tax policies and has led in developing a nationwide federal tax education program for agricultural taxpayers.



The 1991 Faculty Award for Excellence winners were (left to right) Lowell D. Hill, S. Safi Korban, C. Allen Bock, Christine M. Todd, Darrell A. Miller and Gary J. Kling.

Lowell D. Hill, L.J. Norton Professor of Agricultural Marketing, received the Senior Faculty Award for Excellence in Research. He is nationally and internationally recognized for his innovative research strategy and his work on economic equity in measuring grain quality, transportation regulations and market efficiency.

Gary J. Kling, associate professor of horticulture, received the Young Faculty Award for Excellence in Teaching. He was cited for his "total commitment to students and the educational process." He has written widely adopted educational materials used in high schools and 4-H programs as well as junior colleges, colleges and universities.

S. Safi Korban, associate professor of horticulture, received the Young Faculty Award for Excellence in Research. His path-breaking research accomplishments result from "a novel and effective melding of classical plant breeding approaches with the tools and skills of bioengineering and molecular genetics."

Darrell A. Miller, professor of agronomy, received the Senior Faculty Award for Excellence in Teaching. He was cited for "developing the first reported autotutorial instruction unit in the country to teach a crop science course, writing a leading textbook on forage crop science, becoming the first UI agricultural professor to teach on the Illinois UNIVEX network, and teaching statewide on TeleNet."

Christine M. Todd, assistant professor of child development extension, received the Young Faculty Award for Excellence in Extension in recognition of her work as a national leader in child development and child care through extension education programs. Much of her work is targeted toward expanding the availability and quality of child care, improving children's self-care, enhancing child safety and fostering effective parenting.



Four academic professionals in the College of Agriculture were presented Awards for Excellence at the College's annual recognition banquet on Wednesday, February 27. The awards, which include a certificate of recognition and a \$500 recurring annual salary increment, are presented for sustained excellence or for innovative and creative programs.

Helen M. Hegarty, senior research specialist in the Department of Animal Sciences, was commended for sustained excellence in her laboratory expertise, including techniques of cell and tissue cultures, assays for enzymes and other biochemical compounds, and the isolation of proteins and other macromolecular compounds.

Ann Emken, home economics adviser, and **Larry Wilson**, agricultural adviser, with the Cooperative Extension Service in Crawford County, were commended for their innovative and



1991 Academic Professional Awards for Excellence were presented to (left to right) Larry Wilson, Ann Emken, Helen M. Hegarty and C. Chris Doll.

creative community development efforts. By using needs assessments, "town meetings," consumer surveys and focus groups, Emken and Wilson were able to initiate a committee structure to address economic development needs in Crawford County. In addition, they helped establish a number of community activities and helped acquire outside funding.

C. Chris Doll, extension specialist for horticulture in Edwardsville, was recognized for sustained excellence for his statewide leadership in developing educational programs for commercial fruit and vegetable growers. He developed the Illinois Strawberry School and organized the only school in the nation for horseradish growers.



J. Robert Lodge, professor of animal sciences, was presented the Karl E. Gardner Outstanding Undergraduate Adviser Award. The award was established by George R. and Arthur H. Bunn of the Bunn-O-Matic Corporation of Springfield to honor Gardner, a former associate dean and director of resident instruction in the College. The presentation included a certificate of recognition and an award of \$1,000. Lodge was cited for "providing students and prospective students with guidance, counsel and an understanding of the opportunities in animal sciences."



Richard C. Coddington, Department of Agricultural Engineering, received one of the first AMOCO Foundation Awards for Innovation in Undergraduate Instruction. The campus-wide award is designed to honor faculty members who have introduced particularly successful innovations into undergraduate instruction. The award includes \$1,650 in cash.



Two members of the Department of Agronomy were honored at the 1991 Campus Instructional Awards Banquet held April 30. **Torbert R. Rocheford** was presented an Undergraduate Instructional Award for the summer of 1991, and **Robert H. Teyker** was named Vice-Chancellor's Teaching Scholar.



J. Bruce Litchfield, Department of Agricultural Engineering, was presented an Everitt Award for Teaching Excellence for teaching undergraduate engineering students. The award honors William L. Everitt, dean emeritus of the College of Engineering. The award consists of a plaque and a check for \$1,000.



J. Robert Lodge (left) was presented the 1991 Karl E. Gardner Outstanding Undergraduate Adviser Award, which was named for Karl E. Gardner (right), former associate dean and director of resident instruction in the College.



Burton E. Swanson, International Program for Agricultural Knowledge Systems, received the 1991 Outstanding Leadership Award presented by the Association of International Agricultural and Extension Education at the group's annual conference March 29 in St. Louis.



Two College faculty submissions were among eight instruction proposals which were funded for a total of \$63,893 in the Undergraduate Instructional Awards Program at UIUC.

Vicki R. Fitzsimmons, professor of family and consumer economics, received \$7,060 to develop a family financial management course that includes the use of computer and visual media.

Torbert R. Rocheford, professor of agronomy, was awarded \$4,316 to develop an intermediate genetics course using computer-based technology.

The awards typically cover salaries and other faculty expenses for major course-development projects.

Two gifts to the College years ago have turned out to be only the first steps in larger bequests according to **Lynette L. Marshall**, director of resource development.

In 1955 when she was 73 years old, Laura M. Weber gave the UI 640 acres of farm land in LaSalle County. Former dean Louis B. Howard designated the income from the Weber Farms to fund the Weber Awards for continuing education for extension faculty and staff. Each succeeding dean has continued the support.

A former schoolteacher in Lostant who later moved to Lagrange Park, Miss Weber attached no special conditions to the gift. It was her wish, however, that the "farms be operated with due regard for the preservation and maintenance of the fertility of the soil and be an incentive to others to so use and operate similar farms."

Miss Weber died last fall at 109 years old. The College was again a beneficiary of her estate which was to be divided among the UI College of Agriculture, the Chicago Public Library, and the Field Museum of Natural History in Chicago. As a result, the College will receive somewhere between \$600,000 and \$700,000 in unrestricted funds from her estate.

A second gift, Marshall says, is a bequest the College received from the estate of Mrs. Francoise Addington of Santa Barbara, California. Mrs. Addington died in July 1983, leaving her portion of a trust "to the University of Illinois for the use of its agricultural department." That gift provided more than \$1.6 million that was used with other funds to establish the Jonathan Baldwin Turner (JBT) Graduate Fellowship Program in 1985.

The trust had been established by her father, Charles U. Williams of Bloomington, to provide a life income to Mrs. Addington and to a second individual. When the other individual recently died, the trust was dissolved. Because the UI was named in her will, the College received Mrs. Addington's portion of the principal of the trust — roughly 1,860 acres of farmland in McLean and Iroquois Counties. The land

comprises four farms, one of which is a complete section of 640 acres, according to **Dennis Gehrt**, manager of University Trust Farms. "The unrestricted nature of the bequest will benefit the College in many different ways," he adds.

"The value of these gifts to the College is immeasurable," says Dean **W.R. "Reg" Gomes**. "They will allow us to move our programs ahead significantly." ▼

Revitalization continued

and promising ideas for short-term projects. These projects will focus on Youth-at-Risk and Community/Economic Development. We hope to fund the first wave of projects early in 1992. Requests for proposals have already been circulated.

... in Changing and Adapting

It is clear that Illinois extension is on the move, with or without target funding. This movement is exciting and presents unlimited opportunities for local initiatives. The changes taking place are also sad in a way. The CES that has served us so well for nearly three quarters of a century deserves to be celebrated with pride, and it is understandable that many people will view its passing with some sadness. But change is inevitable, and only those organizations that change and adapt to the world around them will be strong and viable in the future.

Illinois CES is changing and adapting so that it will be of the greatest value possible to Illinois citizens. It takes pride in its past, but it also looks forward to its future. And the enduring strengths that have helped extension be so successful in the past — our ties to a great land-grant University, thousands of local volunteers who help to identify real needs and help extension address those needs, cross linkages with research, supportive College and University administrators, dedicated professionals, and a strong and effective state-wide presence — will be just as important in the future. ▼

Research programs in the College of Agriculture are enhanced considerably by gifts and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the College, including the following:

Mary A. Smith, Department of Horticulture: \$9,000 for one year from USGA Turfgrass Research Committee for "A Realistic Whole Plant Microculture Selection System for Turfgrasses."

David A. Lins, Department of Agricultural Economics: \$6,382 from the UIUC Campus Research Board for "Long-Range Financial Planning Model for the Seed Industry."

Charles R. Vossbrinck, Department of Agricultural Economics: \$16,152 from the UIUC Campus Research Board for "Equity in Irrigation Allocation in India: Rent-Seeking Behavior in Gujarat."

Philip Garcia, Department of Agricultural Economics: \$12,000 from the UIUC Campus Research Board for "The Effects of Alternative Frontier Estimation Procedures on the Measurement of Farm Firm Efficiency."

Charles R. Vossbrinck, Office of Agricultural Entomology: \$32,484 for one year from Texas A&M Research Foundation for "Human Microsporidiosis as an Opportunistic Infection."

Hayri Onal, Department of Agricultural Economics: \$12,991 from the UIUC Campus Research Board for "Development of a Solution Algorithm for Two-Level Linear Programming Problems."

Brent A. McBride, Division of Human Development and Family Studies: \$11,448 from the UIUC Campus Research Board for "Predictors of Father Involvement with Preschool-Aged Children: A Multidirectional View."

William L. George, Nancy C. Fain and Kandeh K. Yumkella, Office of Resident Instruction: \$45,675 from USDA/CSRS Higher Education Office Institution Challenge Grant to expand "Summer Research Program for Minority Undergraduate Students."

L. Arthur Spomer, Department of Horticulture: \$7,000 from the UIUC Campus Research Board for "Effects of Elevated Temperature and Atmospheric CO₂ ('greenhouse effect') on Physiology, Growth and Yield of Rice."

Alan L. Kriz, Department of Agronomy: \$9,180 from the UIUC Campus Research Board for "Expression of Maize Globulins in Yeast Cells."

Timothy R. Ellsworth, Department of Agronomy: \$18,636 from the UIUC Campus Research Board for "Characterization of the Fate and Transport of Chemicals in the Soil Environment."

Joseph W. Stucki, Department of Agronomy: \$5,000 from the UIUC Campus Research Board for "Characterization of Redox Reactions in Clay Minerals by Fourier-Transform Infrared Spectroscopy."

Harold D. Guither, Department of Agricultural Economics: \$15,000 for 12 months from Illinois Pork Producers Association for "Economic and Policy Dimensions of Animal Rights and Animal Welfare for the U.S. Swine Industry."

Robert H. Hornbaker, Department of Agricultural Economics: \$21,972 for 12 months from NCRPIAP for "Pesticide Use and Economic Viability of Crop Production Enterprises in the Cornbelt."

J. Kent Mitchell, Department of Agricultural Engineering, and **Allan S. Felsot**, Department of Agricultural Entomology: \$20,000 from USDA Soil Conservation Service for "Best Management Practices for Controlling Field-to-Stream Delivery of Agrochemicals: Field Validation in the Little Vermilion River Watershed."

Gary E. Pepper, Department of Agronomy: \$11,550 for 36 months from Illinois Soybean Program Operating Board for "Support of Soybean Extension Project."

Lyle E. Paul, Department of Agronomy: \$19,278 for 14 months from Illinois Department of Agriculture - Fertilizer Research for "Studies Involving Nitrogen and Potassium Interaction; Potassium Soil Tests; and Nitrogen, Potassium and Phosphorus Interaction."

Fred E. Below and Donald G. Bullock, Department of Agronomy: \$38,765 for 38 months from Illinois Department of Agriculture - Fertilizer Research for "Optimizing Nitrogen Management for Corn Production in Illinois."

Michael J. Mainz, Department of Agronomy: \$92,852 for 26 months from Illinois Department of Agriculture - Fertilizer Research for "The Effect of Four P & K Rates on the Drawdown and Buildup of Soil Test."

Robert G. Hoeft and Emerson D. Nafziger, Department of Agronomy: \$124,867 for 26 months from Illinois Department of Agriculture - Fertilizer Research for "Evaluation of Soils Profile $\text{NO}_3\text{-N}$ for Prediction of N Fertilizer Requirements Under Illinois Conditions."

Donald G. Bullock, Department of Agronomy: \$38,765 for 26 months from Illinois Department of Agriculture - Fertilizer Research for "Evaluation of N Fertilizer Rate, Planting Date, Tillage, and Winter Cover Crops in a Summer Feed Grain/Soybean Production System in Central and Southern Illinois."

Donald G. Bullock, Department of Agronomy: \$20,000 for seven months from Illinois Department of Energy and Natural Resources for "Crop Cover Management Strategies."

Gary E. Pepper and Emerson D. Nafziger, Department of Agronomy: \$10,500 for nine months from Illinois Department of Energy and Natural Resources for "On Farm Research Advisory Team."

Torbert R. Rocheford, Robert J. Lambert and John W. Dudley, Department of Agronomy: \$94,164 for 24 months from Biotechnology Research and Development Corporation for "Specialty Corn Hybrids - Identification of Molecular Markers Associated with Relevant Chemical and Physical Traits."

William F. Simmons, Department of Agronomy: \$10,000 for 36 months from USDA Agricultural Research Service for "Irrigation Control of Mycotoxin Contamination in Preharvest Corn."

Floyd K. McKeith, Department of Animal Sciences: \$10,500 for 12 months from Illinois Pork Producers Association for "Effects of Marination and/or Pre-cooking on the Acceptability and Shelf-Life of Loin Slices and Leg Roasts."

Matthew B. Wheeler, Department of Animal Sciences: \$15,000 for 12 months from Illinois Pork Producers Association for "Characterization of Reproductive Performance of Purebred Meishan Pigs and of 1/2 Chinese Gilts."

Munir Cheryan, Department of Food Science: \$35,720 for 24 months from Illinois and Iowa Corn Marketing Boards for "Improvement of the Saccharification Process Using a Continuous Membrane Reactor."

Munir Cheryan, Department of Food Science: \$15,000 for 24 months from Illinois Department of Energy and Natural Resources for "Improvement of the Saccharification Process Using a Continuous Membrane Reactor."

Willard J. Visek and James A. Kaput, Division of Nutritional Sciences, and William L. Daniel, Department of Cell and Structural Biology: \$238,872 for 36 months from USDA/CSRS for "Molecular Genetic Analyses of Dietary Fat-Regulated Gene Expression."

John B. Masiunas, Department of Horticulture: \$5,500 for 6 months from Illinois Department of Energy and Natural Resources for "A Participatory Research Network for Vegetable Growers Interested in Alternative Production Systems."

S. Safi Korban, Department of Horticulture: \$16,375 for 12 months from USDA Agricultural Research Service for "Establishing Five Satellite Malus Germplasm Core Collections in Illinois, Minnesota, New York, North Carolina and Washington."

Matthew A. Wallig, Department of Veterinary Pathobiology: \$25,000 for 36 months from USDA/CSRS for "High Erucic Acid Development Effort — Crambe and Rapeseed."

Carl J. Jones, Department of Veterinary Pathobiology, and **Richard A. Weinzierl**, Office of Agricultural Entomology: \$119,919 for 24 months for "Integrated Management of Stable Flies in Cattle Feedlots."

Lawrence B. Schook, Department of Animal Sciences: \$12,000 for 12 months from National Pork Producers Council for "Mapping Major Genes for Growth and Reproductive Traits in Swine."

Alan L. Kriz, Department of Agronomy: \$88,671 for 24 months from Biotechnology Research and Development Corporation for "Enhancement of Nutritional Quality of Maize Grain Through Genetic Engineering."

Jan E. Novakofski, Department of Animal Sciences, and William D. O'Brien, Department of Electrical and Computer Engineering: \$852,439 for 36 months from National Live Stock Marketing Board for "Development of an Ultrasound Based Grading System."

Hans P. Blaschek, Department of Food Sciences: \$69,960 for 24 months from Illinois Corn Marketing Board for "Genetic Manipulation of Clostridium Acetobutylicum for Improved Butanol Production From Corn Starch."

Munir Cheryan, Department of Food Science: \$149,957 for 24 months from Great Lakes Governors Council for "Increasing the Efficiency of Ethanol Production Through the Use of a Membrane Technology."

Robert H. Hornbaker, Department of Agricultural Economics: \$8,416 from the UIUC Campus Research Board for "Sustainability of Industrial Plains."

Work was slated to begin in August pending USDA approval of bids to remodel the Environmental

and Agricultural Sciences Building

to house the new National Soybean

Research Laboratory, according to

Douglas B. Bauling, Illinois Agricultural Experiment Station planning engineer. The first phase of the \$5 million federal project will include remodeling the second floor and building an addition to house the mechanical systems.

The work being done now is actually the result of the third round of federal funding. The first and second rounds funded planning and initial demolition. The fourth and last round of funding — in an appropriations bill before Congress during the summer — will provide for remodeling the first floor and basement. Administrative space and a tunnel to the greenhouses will be built with state funds.

"The target for finishing the first construction phase is the end of 1992," Bauling says. "However, the building probably won't be occupied until phase two is well along because of possible disruptions caused by

workmen on the first floor." Initial occupancy is expected near the end of 1993. The project will likely be finished in early 1994.

Like other parts of the campus, the College has had funds for new construction frozen. Although air conditioning was installed in Bevier Hall this summer, plans for further remodeling are on hold. That means the elevator and instructional laboratory — along with the tunnel between Bevier and the Animal Science Laboratory — won't be started this year. Remodeling the fifth floor of Turner Hall will also be delayed until funds are released. "The projects aren't scrapped," Bauling explains. "We'll just have to wait until the state appropriates the money."

The Animal Science Laboratory remodeling, however, has been funded and will continue. Offices and labs were scheduled to be moved from the older section to the new addition in mid-August. Asbestos abatement in the older section of the building will begin when engineering documents are approved. Remodeling will start as soon as possible.

"The earliest the project will start is late October," Bauling says. "Mid November is more likely. After we're started, the project will take approximately 15 months to finish."

The completion of Windsor Road between Neil Street in Champaign and Lincoln Avenue in Urbana will cause an increase in traffic on the South side of Campus and across the University Farms. To avoid traffic as much as possible, the College is planning an internal network of roads to allow access to all the South Farms area without traveling on public rights-of-way.

"We're upgrading existing roads as much as possible to keep from taking more land away from production," Bauling says. "We want to avoid inconveniencing anyone, but at the same time we need to assure safety and security for our people and equipment." ▼

Open House Set

"Sustaining The Future" is the theme for the 1992 College of Agriculture Open House to be held February 28-29. The Open House Committee will be co-chaired by **Sandra R. Casserly**, Office of Agricultural Communications and Education and **Roger L. Courson**, Vocational Agriculture Service.

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APR 10
UNIVERSITY OF ILLINOIS

As we find ourselves in an atmosphere of increasing budget difficulties, we wonder what the future will bring. The College of Agriculture has the mixed blessing of being a part of both a land-grant institution and our state's leading liberal arts university.

To help fulfill the land-grant mission, we have the Agricultural Experiment Station and the Cooperative Extension Service closely woven into the fabric of the College. We're different from every other academic unit on this campus, yet we're a significant component of this institution.

The mission of the University of Illinois is a combination of teaching, research, and public service. The College of Agriculture serves this mission well. One of our strengths is that our faculty are simultaneously serving undergraduate and graduate students, basic and applied

research missions, and the entire population of the state. And we're the only unit on campus that has delineated these roles — through the Agricultural Experiment Station, the Cooperative Extension Service, and the Office of Academic Programs.

The Cooperative Extension Service is vital to the welfare of many of this state's citizens, and it carries the name of the University of Illinois to residents throughout the state. This is public service in its finest sense; our role has always been substantial... and costly. We have scores of people scattered throughout the state, directly serving an increasingly diverse clientele on farms, in small communities, and in the growing cities of Illinois. Our programs range from 4-H to inner-city homemaker assistance to water quality projects like the hydrologic study in Vermilion County (described on page 6).

Along with coordinating the extensive research programs carried on across the state, the Agricultural Experiment Station allows us to provide a home for more than a dozen outstanding USDA research scientists — including Bill Ogren (see page 10), to develop relationships with scientists at the USDA/ARS Northern Regional Research Center in Peoria, and to share researchers and extension specialists with the State Water Survey, State Geological Survey, and State Natural History Survey. In addition, our research successes have paved the way for the recent move into the federally financed Plant and Animal Biotechnology Laboratory, and we're currently remodeling to accommodate the National Soybean Research Laboratory.

The College is continuing to improve our teaching programs. In many respects our

undergraduate curricula are leading the rest of the campus in adapting to changing circumstances. The changes in such courses as AG 100 (page 4) and AG ECON 100 (page 5) reflect the dedication and determination of our faculty and administration to assure our students are exposed to the wide range of challenges facing agriculture today. And we're broadening our international component at every level as we see agriculture's increasing role in world affairs. Certainly agriculture students need to know this, but many other students across the campus ought to be exposed to this knowledge as well.

We recognized that the term "resident instruction" was too restrictive in describing the work of this important facet of our mission. So last fall we changed the name of the Office of Resident Instruction to the Office of Academic Programs. We started this transition under the leadership of associate dean and director of academic programs Bill George. We're pleased that Bill agreed to continue as leader of our important Office of Academic Programs.

During these times of budgetary uncertainty and campus moves toward de-allocation, we must help others realize that the College of Agriculture epitomizes the University missions of teaching, research, and public service. We certainly intend to carry this message with us as we negotiate next year's and future years' budgets with campus administration. ▼

AgriView is published periodically by the College of Agriculture, University of Illinois at Urbana-Champaign.

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News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: AgriView, Office of the Dean, 101 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801.

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This issue is printed on recyclable paper.

Last summer, a campus Committee on Budget Strategy — composed of faculty, administrators, and one student — released a report titled “Campus Planning for the 1990s.” The report presented a series of recommendations to respond to general and sustained decline in state support for the campus.

Central to these recommendations is a redirection of \$15 million over a period of five years. The reallocated funds would be used to finance “unmet needs” in 11 identified areas.

The committee recommended academic program budgets be reduced from 2 to 7 percent (\$8.25 million), research/service unit budgets be reduced 5.25 percent (\$1 million), and administrative/service unit budgets be cut 8 percent (\$5.75 million). The College of Agriculture — including the Agricultural Experiment Station and Cooperative Extension Service — was included, in its entirety, in the academic program category.

The published report didn’t designate any specific reduction for any units. The media, however, have widely reported the College of Agriculture would face a budget cut of 7 percent.

The report recommended that the reallocations should be differential; their recommendations resulted from their evaluation of each college based upon specific criteria of centrality, quality, demand, and cost.

Robert M. Berdahl, vice chancellor for academic affairs, has asked campus units to prepare plans incorporating budget reductions, according to William D. Adams, director of budget and resource planning for the College.

“The expectation is that any reductions within the college would be differential — not across-the-board,” Adams says.

“We’ve been in the reduction mode for several years,” adds Dean W.R. “Reg” Gomes. “The new de-allocation will only exacerbate a difficult situation.”

“The report definitely will lead to change, but we don’t know the magnitude,” Adams says. “Reallocations are still subject to negotiation between the Colleges and the campus. We need funds to meet the needs of our students and protect our centers of excellence.”

Adams points out that during the past five years the College has already experienced significant budget reductions. “We’ve continued to be a ‘good citizen’ of the university and have taken our share of reductions in the past,” he adds.

“The College needs to make priority decisions,” Gomes says of the reallocation process. “We will, if relative dollars continue to become fewer, have to run relatively fewer programs. To do something new, we’ll have to stop doing something we’re doing now.”

Central to the committee’s proposal is several million dollars ear-marked for undergraduate instruction.

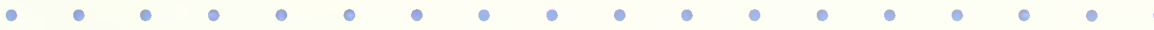
Attracting general education classes is something “we ought to be doing,” Gomes says. Although the bulk of the undergraduate classes are offered by the College of Liberal Arts and Sciences, “there are opportunities for the College of Agriculture to attract a number students from across the campus.”

“It’s not unreasonable to assume that increased emphasis on undergraduate teaching will result in less emphasis on research, graduate teaching, and service,” he adds.

It’s important to remember, Adams suggests, that the proposal centers on a five-year budgeting program that hasn’t yet begun. ▼

Following is a breakdown of the recommended uses of the \$15 million reallocation:

- \$4.3 million
improve undergraduate education
- \$0.5 million
instructional equipment
- \$1.0 million
facilities for improving the quality of instruction
- \$1.0 million
graduate fellowships
- \$0.3 million
minority graduate student support
- \$0.3 million
Research Board
- \$2.0 million
library
- \$0.9 million
minority undergraduate support
- \$1.0 million
faculty recruitment and retention
- \$1.2 million
new program initiatives
- \$2.5 million
new resources for units in greatest need



College Recognition Banquet Set

The 1992 College of Agriculture and Paul A. Funk Recognition Awards Banquet will be held at 6:30 p.m. on Thursday, March 5 in the Illini Union Ballroom. The featured speaker for the evening will be William F. Kirk, vice president and general manager of Du Pont Agricultural Products, Wilmington, Delaware, who will talk on “Illinois Agriculture: Facing the Global Challenge.”

In addition to the Paul A. Funk Recognition Awards, the program will include the presentation of the

1992 faculty and academic professional Awards for Excellence, the Karl E. Gardner Outstanding Undergraduate Adviser Awards, and the John Clyde and Henrietta Downey Spittler Teaching Award.

Banquet tickets are \$15.00 for faculty and staff and \$7.50 for students. They are available from the various departments or from the Office of the Dean. The program is jointly sponsored by the College of Agriculture and the Paul A. Funk Foundation of Bloomington. ▼

"We have an increasingly diverse student population in the College of Agriculture," says William L. George, associate dean and director of academic affairs. "More and more of our students are coming from urban areas and have no concept of the challenges facing agriculture. Additionally, fewer students are coming with any formal education in vocational agriculture; they don't have experience in FFA or 4-H. We need to educate them about what's going on out there."

To meet the challenge, the AG 100 freshman orientation class has been significantly changed. The goal is to broaden students' knowledge of the scope of agriculture and to increase their awareness of the challenges and obstacles facing agriculture.

Under the leadership of assistant dean **Warren K. Wessels**, the class has been designed to focus on agricultural issues and "set the stage for an agricultural education."

"We evolved into a two-hour class," Wessels explains. "It had been a one-hour, pass/fail class. There was a lot of new-student orientation. And we had visitors from business and industry and representatives from the various departments talk about careers in agriculture."

"A few years ago we began adding a little about contemporary issues," he adds. "And last year we included one discussion session as a trial, and it went very well."

Each week, AG 100 features a different faculty member who lectures on a topic of current significance. Students write a summary of the presentation before they leave the lecture hall, and later in the week, they meet in discussion groups of 20 or fewer.

Discussions are conducted by faculty, not teaching assistants. Following each session, students write one-page "micro themes"

about the week's subject. All written work is graded for *writing* as well as content.

"AG 100 is a 'cornerstone' course in contemporary issues," George says. "It's different because in addition to lectures, there are discussion sections where students can participate and interact with others concerning the topics."

"Not all students understand the issues," Wessels adds. "For some of them, their first exposure to a subject is in the lecture."

George also points out that even students who may have grown up on a farm may "come from specialized farming operations and don't have experience with all aspects of agriculture."

"Kids who grew up on a strictly-grain farm haven't been exposed to the questions surrounding animal agriculture," George suggests. "They don't have experience to adequately evaluate the arguments posed by animal rights groups, for instance."

"It's important for the success of courses like this that the faculty become involved and participate in developing and sustaining them," he says. ▼

editor's note: This article is the first of a series on the changing undergraduate curriculum in the College.

The College developed AG 100 to present a broad perspective on what's happening in current agriculture. Topics range from international marketing and international influences to water quality and other environmental concerns.

Topics and presenters for Fall 1991 included:

Global Perspectives of the Agriculture and Food Industry, W.R. Gomes, dean

Agricultural Sustainability, John W. Gerber, Horticulture

Natural Resource and Conservation Policy, Thomas J. Jacob, Forestry

Animal Biotechnology, Lawrence J. Schook, Animal Sciences

Plant Biotechnology, Torbert R. Rocheford, Agronomy

Animal Rights and Welfare, Harold W. Gonyou, Animal Sciences

Food Safety, Quality and Risk Assessment, Lloyd D. Witter, Food Science

Water Quality, Alan S. Felsott, Agricultural Entomology

Food and Agriculture Policy, Harold D. Guither, Agricultural Economics

Ethics and Values, Robert G. Wengert, Department of Philosophy

He looks as if he could have

stepped off the stage in a

production of "The Music Man."

The drummer, though, is a role

Wes Seitz assumes for "Peddlers

and Drummers," one of his

lectures in AG ECON 100.

"I really want to make this course exceptional," Seitz explains. He's doing it with reading, discussions, hands-on computer homework, and interesting lectures.



AG ECON 100 is an agriculture core course. Although it's not required, about 260 students select it each year — 180 "It's dramatically changed from three years ago," says Wesley D. Seitz, professor in the Department of Agricultural Economics and the teacher this year. The change was made by Seitz and Gerald C. Nelson, who

Introductory economics keeps up with the times

co-taught the course until last year, when Seitz was on sabbatic leave and Nelson did the teaching. Seitz is teaching alone this year.

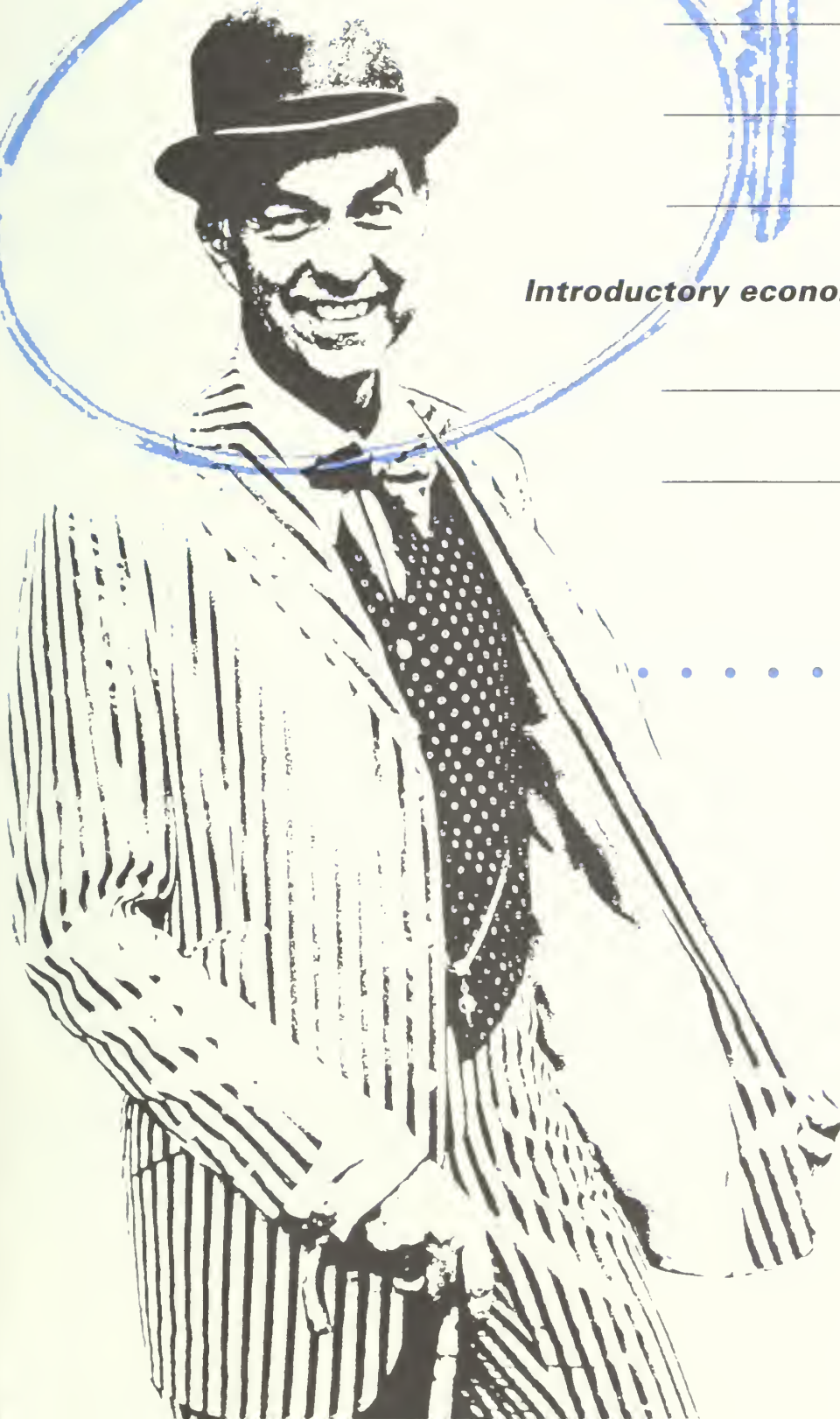
Seitz and Nelson added computer-based homework (see page 8, Summer 1991 issue of *AgriView*), along with a computerized lecture delivery system that complements the homework.

"We added macro economics, and we added international content," Seitz explains. "We didn't just add a lecture or two to be international, we've included international exposure throughout the entire course."

"We've also added a small section on agribusiness so students understand the difference between a farming enterprise and how a company is run," he adds. There's also a lecture and discussion on ethics.

Presentation is important to Seitz. He delivers one lecture wearing an FFA jacket and explains the development of agriculture using stories from his father and grandfather about the Seitz farm in Ohio.

Seitz and Nelson have joined with emeritus professor **Harold Halcrow** to write a new introductory ag economics text. They initially expected to revise a 10-year-old text by Halcrow, but they've ended up with a book that's "dramatically different from the previous one," Seitz says. ▽



Project seeks to identify, control nitrate problem

The Little Vermilion River project involves the study of a hydrologic unit. What's that?

A hydrologic unit is a watershed; the area of land that is entirely drained to one place. In this case, the "one place" is Georgetown Lake, which is an impoundment on the Little Vermilion River.

A hydrologic unit can have



sub-units, can be a sub-unit of a larger system, or both. For

example, the Little Vermilion

River drains into the Wabash

River, which drains into the Ohio

River, which drains into the

Mississippi River. On the other

hand, a small creek that flows into

the Little Vermilion River would

be a sub-unit of the Little

Vermilion hydrologic unit.

Georgetown Lake in Vermilion County isn't swimmable. Water quality is marginal, and nitrate concentration often exceeds standards.

A combined SCS, ASCS and CES project under the direction of College of Agriculture scientists is studying the Little Vermilion River hydrologic unit — the water source for Georgetown Lake — to discover where the pollutants come from and how to control them.

"The nitrate concentration is a problem for the town of Georgetown, which gets its drinking water from the lake," says **Michael C. Hirschi**, associate professor, soil and water extension, in the Department of Agricultural Engineering. "We want to identify the problem, explain why the problem exists, identify the best management practices to alleviate the problem, and help in the adoption of these practices."

Because most of the hydrologic unit — and therefore the source of contamination — is farmland, researchers are analyzing water from drainage tiles and from surface runoff. They want to identify the sources of contamination and then determine the farming practices that can best reduce further problems.

One obstacle, Hirschi explains, is that the nitrates come from non-point sources of contamination. Although water in tile lines gives an indication of where contaminants come from, this can encompass an area of "hundreds or thousands of acres." The Little Vermilion hydrologic unit is about 122,000 acres or roughly 14 miles square.

Bruce J. Lesikar, visiting assistant professor, soil and water, in the Department of Agricultural Engineering, is a member of the research team. "We're measuring water flow through field tiles," Lesikar explains. "Then we're measuring chemical concentrations in the tiles and in the river and trying to identify the sources of contamination."

"Much of the water from the tile lines finds its way into the lake," Hirschi says. "But we're also looking at erosion and sediment from surface water because the lake is about 50 percent silted in."

To evaluate chemical concentration in field tiles, researchers have installed monitoring systems in several locations throughout the area. They identified well-defined areas and located the tile lines that drain each one. Then they dug "man holes" just before the discharge point of each tile system and installed 42-inch-diameter corrugated pipe down to the tile lines, which range from 4 to 12 feet below the surface. In each hole, the researchers intercepted the tile and installed a weir to measure water flow through the line on a time-continuous basis.

Periodically — especially during periods of heavy flow following storms — water from each tile is sampled for chemical content. Chemical concentrations are correlated with flow volume through the tile to estimate the quantity of nutrients coming from the tile system.

"We want to identify different areas that are similar in size, soil composition, and farming practices," Hirschi says. "Then we can manage the farming operations differently and compare the water coming from them to see if different practices can reduce the amount of contamination."

The researchers' goal is to compare treated fields with untreated fields and measure nitrate concentrations in the tile outlets.

"Because we can't have perfectly matched, replicated areas, it's really not a research project," Hirschi says. "It's a demonstration/monitoring study that can be used for informational and educational purposes."

Hirsi explains that the researchers hope to use computer modeling to identify “hot” spots in terms of such variables as topography, land use, and farming practices.

“It’s possible to find hot spots that are particularly bothersome — a feedlot on high ground for example,” he says. “We don’t know what the source of contaminants in the Little Vermilion is. There could be only a few high contribution areas, or the problem may be fairly uniform throughout the watershed.”

“The project will also measure surface water,” Lesikar explains. “We plan to establish surface-flow monitors and use ‘vegetative filter strips’ to try to decrease sediment — which generally contains absorbed phosphorus.”

“We’ll also investigate improving water quality with ‘constructed’ wetlands,” he adds. “These use plants that remove nitrates from the water through the natural nitrogen cycle. The chemistry of wetlands converts nitrates into gaseous nitrogen and biomass.”

By the time the project is finished, the researchers hope to provide results that will help accomplish four goals.

1. *Reduce contamination through improved nutrient management.*
2. *Meet state and federal erosion control guidelines within the hydrologic unit.*
3. *Increase farmer awareness and use of resource management systems.*
4. *Increase citizen understanding of health hazards, environmental impacts, and the potential for disease outbreak caused by inadequately treated sewage discharged into the watershed.* ▼

Carol Stankus, graduate student in food science, shows a visitor all about molecular modeling on a Macintosh computer at the 1990 Ag Open House.



Open House

A large garden will greet visitors entering the Stock Pavilion for the third annual College of Agriculture Open House on February 28 and 29.

“Sustaining the Future” is the theme of the two-day event that will be held in nine different buildings from 9 a.m. to 4 p.m. each day. Demonstrations and displays will include seafood from the prairie, family budgeting, the next generation of Chinese pigs, tours of the dairy barns, and making your own soil. These and others will illustrate how the College is “Sustaining the Future” for generations to come.

Assistant Dean **Charles E. Olson** has announced awards will be presented to exhibits in each of five categories:

- Faculty-Staff Departmental
- Student Club
- Undergraduate Student
- Graduate Student
- People’s Choice

Winners in the first four categories will be selected Friday morning by a special judging team from both on and off campus. The *People’s Choice* will be chosen by visitors who will be able to cast ballots for their favorites.

“Open House is our opportunity to show and tell a diverse audience

about the food, fiber, and family programs of the College and how we contribute to the well-being of the people of the state of Illinois,” says Dean **W.R. “Reg” Gomes**. “I hope every member of the faculty and staff will take this occasion to help tell our story.”

Because University parking lots will be restricted to permit holders on Friday, visitors may park in the Assembly Hall lot west of First Street and ride shuttle-buses to the Stock Pavilion. Parking will be available on campus on Saturday. Each day, other buses will serve the Stock Pavilion, the automated dairy barns, the Meat Science Laboratory, and several other Open House buildings.

A variety of College organizations will be selling food — for lunch or a snack — in several buildings on Friday and Saturday.

For more information, contact Open House co-chairs **Sandra Casserly** at 333-9441 or **Roger Courson** at 244-5165. ▼

Traditional study abroad programs take a student for a semester or a full academic year and immerse him or her in a foreign culture while the student pursues a full course load in the host institution in another country.

For many students, this is an exciting and enriching experience. They can continue to study in their major fields and at the same time learn more about another culture, see first-hand many important historic places, and perhaps even improve proficiency in a foreign language.

Some additional study abroad activities in the College include:

- **Duane Erickson**, Department of Agricultural Economics, took a group of students to the Caribbean last spring break and is taking another group this year.
- The College's International Student Association is going to Europe for a tour this spring.
- They went to Mexico last year. Students have been or are studying in Scotland, England, Wales, Australia, and Argentina among other countries.

"We send from one to eight or nine students on a study abroad program each semester," says **Charles E. Olson**, assistant dean in the Office of Academic Programs. "There are two options a student may choose. One is to study 'my major' in another country; the other is to study abroad for the cultural experience."

"Without strong language skills, students can't fully participate in a full-term education," Olson adds. "That limits them to English-speaking countries or countries with languages commonly taught in American schools; usually not Russia, Japan, China, eastern Europe, or Asia."

Some students are reluctant to be away from campus for semester-long or year-long programs. So to broaden international studies for more agriculture students, the College is offering more short-term experiences to give students foreign opportunities without a formal classroom setting.

"Students participating in short-term study abroad programs have an opportunity to develop language skills, study other cultures, and learn about how agriculture operates in other parts of the world," says **William L. George**, associate dean and director of academic programs.

The newest undergraduate student exchange program the College has developed is with St. Petersburg Agricultural State University in Russia. The first students are preparing to go during the coming summer.

The Office of International Agriculture played a facilitator role according to **Thomas A. McCowen**, associate director of the Office of International Agriculture. "It represents our overall interest in making the international experience available to all our undergraduates," he says.

The Russia program began at Southern Illinois University-Carbondale. "Our SIU colleagues heard from USIA about a competitive program," McCowen says. "But they didn't think they could do it alone. They weren't successful in past efforts and thought teamwork would help by pooling the resources of both institutions."

Representatives from the College, SIU, and the UI Study Abroad Office worked together to develop a student exchange program that will bring Russian students to both UI and SIU campuses this summer and will send UI and SIU students to St. Petersburg State. McCowen says they expect the two groups of students to spend time together in both countries and "not just pass each other in airplanes going different directions."

College faculty members **Jack M. Widholm**, Department of Agronomy, and **Bruce J. Sherrick**, Department of Agricultural Economics, traveled with Olson to St. Petersburg last fall to lay plans for the 1992 Summer program.

A summer program on the other side of the world began during 1991 with four UI students, including two from the College. David A. Hollinrake, an ag economics junior from Seaton, and R.A. "Tony" Drach, an ag industries senior from Saunemin, spent two months in Japan as part of an academic cooperation agreement between Kinki University and UI.

The Kinki & Illinois Cooperative Training Program is designed to let UI students experience Japanese culture and learn about Japanese business. Hollinrake and Drach's 10-week work/study program included cultural study at Kinki University and a training program at Sumitomo Chemical

Co. combined with a homestay with a Japanese family.

"We have students preparing to go to Japan again this year," Olson says. "But this time, we're requiring them to have stronger language preparation."

Students preparing to go to Russia and Japan will have been enrolled in the language for a minimum one-semester intensive course. "They need to learn about the part of the world they're going to. They need to be knowledgeable about the culture. They need language instruction," Olson says. "They won't be fluent, but they'll have survival skills."

Olson adds that faculty escorts are needed for student groups going overseas. "This can be a great opportunity for faculty," he says. "But they need language skills, too. We'd like more faculty to prepare and participate in these exchange programs."

The College continues researching other undergraduate opportunities abroad. George will go to China in late spring with a group of College of Engineering students who will be participating in a summer program at Shanghai University. George will begin laying groundwork for similar programs for agriculture students in China in the future. He's also exploring a joint program with Japan and China in Thailand, where students can study farming systems from an Asian perspective. . . in English.

The College is also studying other undergraduate opportunities abroad. "We're looking at 'different' countries — not western Europe," McCowen says. "Maybe in the tropics, eastern Europe, the arid lands of the Middle East, or Pakistan." And since the UI has a relationship with Egerton University in Kenya, McCowen and assistant dean **Warren Wessels** have been exploring an exchange program there.

"We want as many of our students as possible to have an international experience," Olson says. "The campus Study Abroad office has challenged us to set a goal of ten percent participation. We're a long ways away from that now, but we're making progress." ▼



Renovation Planned for Bevier Commons

It hasn't changed much since Bevier Hall opened 35 years ago. Bevier Commons has the look and feel of the 1950s. But a new look is coming as a result of a fund raising project initiated by the board of directors of the SHRFS/Home Economics Alumni Association.

Because state funding isn't available, the board decided to encourage alumni support and corporate participation for the project. And since the renovation will be entirely financed with private contributions, funds must be in-hand before each phase of work begins.

The new design for the Commons was created by Julia Redwine Tometz, a 1976 alumna of the School and president of Tometz Design Associates, Inc., of Lake Forest, according to **Karena Elliott**, associate director of development. "The traditional concept will add elegance to many activities and events for years to come," Elliott says. "The new Commons will also provide a comfortable place for students, staff, and visitors to enjoy while relaxing."

Tometz's design is reminiscent of the Illini Union. The plans are conservative while providing a warm and comfortable environment. The color

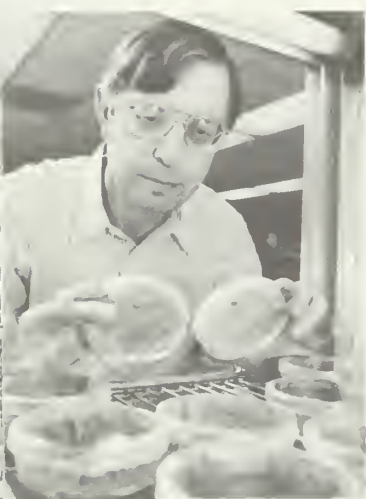
scheme, furnishings, and attention to the room's special architectural elements will make the new Commons the front door of the School, much as the Union is regarded as the front door of the campus.

The design includes three alternative layouts for different activities — such as receptions, club meetings, and daily study — without removing or adding furniture. And improved lighting levels can be easily manipulated.

The \$50,000 project will be completed in three phases. The first will include installing crown molding, recessed lighting and wall sconces, new paint, and construction of a storage area. Carpeting and draperies will come next. New furnishings and lamps will comprise the final phase.

Sufficient funds have been received to initiate phase one, Elliott reports, and bids are being reviewed. ▼

William L. Ogren is one of 22 University of Illinois faculty members who were named 1991 University Scholars. Since 1985, 181 faculty on both Chicago and Urbana-Champaign campuses have received this prestigious award for the very best in scholarship and research. "It's a tremendous honor," Ogren says.



Bill Ogren checks petri dishes of Arabidopsis rca mutant housed in a refrigerated incubation chamber.

"This is an outstanding research university. I feel terrific they consider my research worth recognizing."

Because the University Scholars program recognizes UI faculty, Ogren's award is particularly noteworthy. He's a USDA scientist with a zero-percent faculty appointment.

"It's fitting that Bill has been recognized by the University for the important work he's done here," says Dean W.R. "Reg" Gomes. "This recognition also acknowledges the significant contribution USDA scientists make to our research effort. It reflects the important relationship between USDA and the University of Illinois."

More than 15 USDA scientists are currently on the UI campus in ag engineering, agronomy, plant pathology, and plant biology.

Ogren's research deals with photosynthetic carbon metabolism — how plants use sunlight and carbon dioxide. He's research leader for the Agricultural Research Service photosynthesis research unit and holds a concurrent appointment as professor in the Department of Agronomy.

The photosynthesis unit includes three scientists in the Department of Agronomy and three in the Department of Plant Biology in the School of Life Sciences, a rare exception to usual USDA assignments in ag colleges. Most land-grant colleges host USDA scientists, furnishing research facilities and academic appointments that provide access to university resources, allow participation in campus activities, and offer an opportunity for teaching.

"It's the best of both worlds," Ogren says. "There's stability of federal funding, and there's stimulation from the new students coming through all the time. We also have an opportunity to collaborate with other university faculty. For example, I've been able to work with Jack Widholm, who was one of the first to develop photosynthetically competent cell cultures."

"I feel my work has been more successful because I've been on a university campus," he adds. "There's a greater exposure to new and different ideas. We always have one or two graduate students and post docs working in the lab."

University Scholars are nominated by their departments and selected by a committee of senior faculty. Established in 1985 and funded by the UI Foundation's Advancement Fund, the program awards senior faculty with \$12,000 a year for three years and young scholars with \$6,000 a year for three years. The stipend can be used to travel, hire graduate assistants, purchase research equipment, or otherwise support scholarly activities.

"One always runs close to the budget in terms of students and supplies," Ogren says. "This will give me the peace of mind not to worry about funding. We'll get more work done. The money will go to students or supplies."

Last year Ogren received the Alexander von Humboldt Award for having made the most significant contribution to American agriculture during the previous five years. He also has been elected to the National Academy of Sciences and the American Academy of Arts and Sciences. In addition, he has received the Crop Science Research Award from the Crop Science Society of America, the USDA Superior Service Award, and the C.F. Kettering Photosynthesis Award of the American Society of Plant Physiologists.

He is a past president of the American Society of Plant Physiologists. ▼

Past University Scholars from the College of Agriculture:

1990	Lawrence B. Schook Department of Animal Sciences
1989	Hans P. Blaschek Department of Food Science
1989	John B. Braden Department of Agricultural Economics
1988	Donald P. Briskin Department of Agronomy
1988	Willard J. Visek Department of Food Science
1987	Malcolm C. Shurtleff Department of Plant Pathology
1986	David H. Baker Department of Animal Sciences
1986	George C. Fahey Department of Animal Sciences

John M. Gerber, assistant director of the Illinois Agricultural Experiment Station, was awarded the National Honor Award from the Soil and Water Conservation Society at their national meeting on August 5.

Jimmy H. Clark, Department of Animal Sciences, was presented the American Cyanamid Company Award at the American Dairy Science Association's annual meeting. Established to recognize noteworthy accomplishment in the field of milk production, the award honors Clark's "significant contributions in research, teaching and extension that advance assimilation of new milk production technologies."

Robert H. Hornbaker, Department of Agricultural Economics, was recognized as the adviser of one of the outstanding master's theses honored by the American Agricultural Economics Association. The thesis by Eric D. Ebel is titled, "Analysis of Economics of Pseudorabies Disease in Swine Using a Stochastic Simulation Model of a Farrow-to-Finish Operation."

William L. Ogren, Department of Agronomy, was selected as a 1991 University Scholar. He will receive a stipend for three years to support his scholarly activities — to travel, hire graduate assistants, purchase research equipment or otherwise further his scholarship. Support for the program comes from the UI Foundation's Advancement Fund. Ogren is one of 22 faculty members from both campuses who were honored.

Frank J. Stevenson, Department of Agronomy, received the Bouyoucos Soil Science Distinguished Career Award presented by the Soil Science Society of America. The award is presented to a soil scientist who exhibited an outstanding record of service over a minimum of 20 years.

W.R. Gomes, dean of the College, was appointed by Secretary of Agriculture Edward Madigan to the Board of Trustees of the U.S.-Israeli Binational Research and Development Fund and was appointed by Governor Jim Edgar to the Governor's Board of Agricultural Advisors. He was also honored last fall as an outstanding alumnus by California Polytechnic State University.

Richard E. Ford, Department of Plant Pathology, received the Fellow Award from the American Phytopathological Society. He was honored for his research contribution in plant virology, his leadership in professional societies — including the presidency of APS — and his ability to foster interdepartmental cooperation.

Malcolm C. Shurtleff, Department of Plant Pathology, received the Extension Award from the American Phytopathological Society in recognition of excellence in extension plant pathology. He was cited for superior contributions in developing and implementing leadership roles in local, regional, and national professional phytopathological organizations.

Dennis W. Gehrt, Department of Agricultural Economics, was named an Accredited Farm Manager (AFM) by the American Society of Farm Managers and Rural Appraisers at its annual meeting in Phoenix, Arizona in November. Gehrt, a trust farm manager in the College, earned the AFM designation by meeting stringent education and experience requirements and passing rigorous oral and written examinations.

Tom R. Carr, Department of Animal Sciences, was elected president-elect of the American Meat Science Association at the 44th Annual Reciprocal Meat Conference at Kansas State University. He'll begin his term as president in June.



Tom R. Carr, Department of Animal Sciences, receives a plaque from Governor Jim Edgar in appreciation for 17 years' service to the Illinois State Fair. Carr, professor of meat sciences, served as carcass superintendent for pork, beef, and lamb for 11 years.

Eight present and past faculty in the Department of Food Science received an American Soybean Association/ICI Americas Soybean Research Team Recognition Award at the ASA Soybean EXPO in Nashville in July. Members of the UI research team include **Alvin I. Nelson**, **M. Steinberg** (deceased), **Munir Cheryan**, **John W. Erdman**, **Edward G. Perkins**, **Lun-Shin Wei**, **Ricardo Villota** and **Ion C. Baianu**. They were cited for their work in developing soy-based foods and beverages, understanding the function of soy-derived products in food systems, evaluating the impact of soy foods in human nutrition, and enhancing the utilization of soy products. The team received a plaque and a \$7,500 research grant.

Harold D. Guither, Department of Agricultural Economics, was honored as Friend of Cooperatives 1991 by the Illinois Cooperative Coordinating Committee. The ICC is an organization representing the major agricultural marketing, supply, and service cooperatives in Illinois. Guither was recognized for his "contributions to cooperatives and the not-for-profit cooperative way of doing business."

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Several extension youth advisers were recognized by the National Association of Extension 4-H Agents at their annual meeting November 2-7 in Phoenix, Arizona.

Diane Bechtel, Ford County, and **Steve Wagoner**, Logan County, received Distinguished Service Awards.

Sherry Fulton, DeWitt County, **Denise Kistner**, Christian County, **Mary Jo Stewart**, Macon County, and **Steve Wagoner**, Logan County, were presented the National Communicator Award for a promotional piece they produced.

Janeen Emory, Henry County, received an Achievement In-Service Award.

Julie West, Rock Island County, and **Al Zwilling**, Mercer County, were awarded Youth at Risk grants.

Steve Wagoner, Logan County, received a Regional Communicator Award for educational radio programming.

• • •
Lowell D. Hill, Department of Agricultural Economics, was presented the Soybean Market Development Award and **James B. Sinclair**, Department of Plant Pathology, received the Soybean Research Award from the Land of Lincoln Soybean Association at its annual meeting in Springfield on November 23.

• • •
Lowell D. Hill, Department of Agricultural Economics, was elected as a Fellow at the 1991 American Agricultural Economics Association annual meeting in Manhattan, Kansas in August.

• • •
Dennis R. Epplin, extension adviser, agriculture, in Jefferson County received the Frank H. Shuman Memorial Award for his participation in the Illinois Agricultural Leadership Program. Epplin is the first extension adviser to be accepted in the program.

• • •
David M. Dimmick and **Paul R. Wirth**, Cooperative Extension Service, each received a Distinguished Service Award from the National Association of County Agricultural Agents during its 76th annual meeting in Peoria, August 25-29. Dimmick, agriculture adviser in Green County, was recognized for his leadership style "which helps farmers adapt to the evolutionary and revolutionary changes in the agricultural environment." Wirth, agriculture adviser in Richland County, was cited for his work in agronomy programs, 4-H programs, and community activities.

• • •
James B. Sinclair, Department of Plant Pathology, received the Distinguished Service Award from the North Central Division of the American Phytopathological Society in recognition of his work with scientists in four other departments researching biological factors that affect soybean grain and seed quality.

• • •
David W. Allen, Cooperative Extension Service, received an achievement award from the National Association of County Agricultural Agents at its annual meeting in Peoria August 25-29. The agriculture adviser in Piatt County, Allen was recognized for his work on the program "Ag-2000 — Producing for an International Market."

• • •
John M. Gerber, assistant director of the Illinois Agricultural Experiment Station, has been selected to serve on a national review board for the Kellogg Foundation of programs conducted by the American Farmland Trust.

• • •
Jimmy H. Clark, Department of Animal Sciences, has been elected vice president of the American Dairy Science Association.

• • •
Gary D. Bickmeier, Cooperative Extension Service agriculture adviser in Scott County, was honored as one of four national 4-H and Youth "Search for Excellence" winners at the annual meeting of the National Association of County Agents. The award recognizes extension programs that reflect quality and innovation in both planning and completion. He also received the association's 4-H Recognition award and the Chem Lawn Environmental Protection award.

• • •
James D. Oliver, Cooperative Extension Service, received the 1991 Cooperative Extension System Award for Diversity. The award is given each year by USDA—Extension Service for leadership in expanding extension's outreach to new and diverse audiences and increasing multicultural understanding in the land-grant university system. The award was presented at the annual meeting of the National Association of State Universities and Land-Grant Colleges.

Four individuals and two, two-person teams received Illinois CES Awards for Outstanding or Innovative Programming. **Gary Bickmeier**, extension adviser, agriculture, Scott County, was recognized for on-farm sustainable agriculture research conducted by youth. **Darla Binkley**, extension adviser, youth, Livingston County, was recognized for developing a program that provided child care for school-age children. **Mary Lou Carlson**, extension adviser, agriculture, Peoria County, was cited for her work in solid waste management education. **Nancy King**, extension adviser, youth, Champaign County, was recognized for developing a program of youth awareness of the problems of the homeless.

The team of **Jim Nugent**, communications adviser, Region IV, and **Carlson** was recognized for developing a program of solid waste management education in conjunction with a local garden show. Two Knox County extension advisers, **Jananne Finck**, home economics, and **Cheryl Metzger**, youth, were cited for their team leadership in organizing and developing a school-based curriculum for raising youth self-esteem.

Two Christian County extension advisers, **Linda L. Smith**, home economics, and **Denise Kistner**, youth, received the Moyle S. Williams Award at the 1991 Illinois extension conference. Smith and Kistner were recognized for developing First Family Week, a program that created awareness of the importance of family in today's society. The award is sponsored by Epsilon Sigma Phi.

Jane Scherer, Cooperative Extension Service, received the Epsilon Sigma Phi North Central Region Distinguished Service Award at the National Council Recognition Banquet on November 10 in Washington, D.C. The coordinator of extension's consumer and homemaking education program, Scherer was cited for her significant contributions to extension on regional and state bases.

Several faculty with the Illinois Cooperative Extension Service were honored for outstanding professional achievement and public service during the 1991 CES annual conference. Receiving the CES Award for Sustained Excellence in Programming were **Robert D. Espeseth**, professor and extension recreation resources specialist; **Robert G. Hoeft**, professor and extension soil fertility specialist; and **Jerry W. Robinson Jr.**, professor and extension rural sociologist. **Richard A. Weinzierl**, associate professor and extension entomologist, was presented the CES Award for Outstanding and Innovative Programming for developing publications on alternative pest management strategies.

Faculty Research Grants

Research programs in the College of Agriculture are enhanced considerably by gifts and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the College, including the following:

Jerry W. Robinson, Agricultural Economics: \$367,416 for 24 months from Illinois Board of Higher Education and "\$10,000 from the Governor's Rural Affairs Council for five months for "Helping rural communities prepare for economic development.

Theodore Hymowitz, Agronomy: \$91,545 for 36 months from Illinois Soybean Program Operating Board for "Genetics of the Bowman-Birk inhibitor in soybeans."

Richard L. Mulvaney, Agronomy: \$27,062 for 12 months from Illinois Department of Agriculture for "Factors affecting the efficient use of nitrogen fertilizers in Illinois soils."

Lyle E. Paul, Agronomy: \$6,127 for 12 months from Illinois Department of Agriculture for "Nutrient placement and movement under zero-till conditions."

Theodore R. Peck, Agronomy: \$24,851 for 12 months from Illinois Department of Agriculture for "Spatial variability of soil pH, phosphorus, and potassium levels in two Illinois fields."

John E. Sawyer, Agronomy: \$16,428 for 12 months from Illinois Department of Agriculture for "Comparison of plow layer-distributed and surface-applied limestone for no-till crop production."

Joseph W. Stucki, Agronomy: \$39,657 for 12 months from Illinois Department of Agriculture for "Effects of iron oxidation state on the fate and behavior of potassium in soils."

Robert H. Teyker, **Robert J. Lambert** and **Robert G. Hoeft**, Agronomy: \$43,464 for 12 months from Illinois Department of Agriculture for "Improving corn nitrogen use efficiency through enhanced ammonium availability."

Jerald K. Pataky, Plant Pathology: \$12,800 for 12 months from Midwest Food Processors Association for "Improving disease resistance in sweet corn."

Richard M. Vanden Heuvel and **Richard L. Mulvaney**, Agronomy: \$25,809 for 12 months from Illinois Department of Agriculture for "Evaluation of natural abundance 15N value methodology to identify and quantify sources of nitrate in rural, private drinking water wells."

Torbert R. Rocheford, Agronomy: \$94,164 for 12 months from Midwest Plant Biotechnology Consortium for "Specialty corn hybrid identification of molecular markers associated with relevant chemical. . ."

Lawrence B. Schook, Animal Sciences: \$12,000 for 12 months from National Pork Producers Council for "Mapping major genes for growth and reproductive traits in swine."

Matthew B. Wheeler, Animal Sciences: \$13,536 for 12 months from National Pork Producers Council for "Embryonic stem cells: an improved method for producing transgenic swine."

Susan M. Potter, Foods and Nutrition: \$20,000 for 12 months from American Heart Association for "Influence of dietary protein and amino acids on the development of cholesterol metabolism."

Stephen K. Farrand, Plant Pathology: \$30,000 for 27 months from Biotechnology Research and Development Corporation for "Multiple gene expression from a single promoter in transgenic plants."

Sandra L. Brown, Forestry: \$83,944 for 36 months from U.S. Forest Service/Institute of Tropical Forestry for "Long-term dynamics of forest stands in Venezuela."

Steven T. Sonka, Agricultural Economics: \$22,837 for 12 months from National Science Foundation for "Collaborative research in decision, risk, and management science: farm level decisions in the face of global warming."

Donald L. Day and **Ruihong Zhang**, Agricultural Engineering, and **Robert A. Easter**, Animal Sciences: \$12,480 for 19 months from National Pork Producers Council for "Predicting generation ratio of air contaminants from liquid manure."

Leslie L. Christianson, Agricultural Engineering, Michael T. McCulley, Small Homes Council, and Mark J. Rood, Civil Engineering: \$18,500 for 4 months from U.S. Army Construction Engineering Research Laboratory to provide a research plan for indoor air quality.

Gerald L. Riskowski and **Leslie L. Christianson**, Agricultural Engineering: \$12,449 for 12 months from National Pork Producers Council for "Optimization procedure for designing ventilation systems."

F. William Simmons, Agronomy: \$70,352 for 5 months from U.S. Army Construction Engineering research Laboratory for "Characterization of wastewater treatment plant sludge dewatering and mineralization on reed bed."

Sidney L. Spahr, Animal Sciences: \$16,000 for 3 months from Holstein Association for "Performance of injectable electronic identification units in cattle."

Harris A. Lewin and **Rohan L. Fernando**, Animal Sciences: \$98,735 for 36 months from USDA for "Towards a 20 cm map of the bovine genome."

Matthew B. Wheeler and **Lawrence B. Schook**, Animal Sciences: \$50,000 for 12 months from USDA for "Modification of the TNF α gene in swine embryonic stem cells via homologous recombination."

Marjorie E. Mead, **Jane A. Scherer** and **Jimmy L. Shonkwiler**, Extension: \$81,250 for 2 months from Illinois Adult Vocational Education for "Consumer & homemaking education program for disadvantaged individuals."

William H. Peterson, **Peter D. Bloome** and **Jimmy L. Shonkwiler**, Extension: \$79,571 for 12 months from Illinois Department of Energy and Natural resources for "Agricultural energy information and education project."

Jane A. Scherer, **Jimmy L. Shonkwiler** and **Marjorie R. Hamann**, Extension: \$274,924 for 11 months from Illinois Adult Vocational Education for "Parent readiness education program for low-income single parents and homemakers."

Donald L. Uchtmann and **Marjorie E. Mead**, Extension: \$11,682 for 1 month from Illinois Board of Education for "Parent readiness education program for low-income single parents."

Ion Baianu, Food Science: \$40,000 for 24 months from Illinois Corn Marketing Board for "Increased marketing of corn through the utilization of corn protein components in biodegradable. . ."

Keith W. Kelley, Animal Sciences: \$227,273 for five years from U.S. Public Health Service for "Hormonal restoration of a functional thymus during aging."

John W. Erdman, Food Science, and **Neal R. Merchen** and **George C. Fahey**, Animal Sciences: \$103,607 for 24 months from USDA for "Animal models for human carotenoid metabolism."

Edward W. Osborne and **Jeffrey W. Moss**, Agricultural Communications and Education: \$53,067 for 24 months from Illinois Board of Education for "Enhancing science teaching and content skills of secondary teachers implementing applied science courses."

George Z. Gertner, Forestry: \$28,643 for 9 months from U.S. Army Construction Engineering Research Laboratory to provide grass data development efforts in support of LCTA at army installations.

Reed W. Larson, Human Development and Family Studies: \$105,175 for 12 months from U.S. Public Health Service for "Stress, coping and emotional well-being in adolescence."

Henry T. Wilkinson and **Wayne L. Pederson**, Plant Pathology: \$55,861 for 36 months from USDA for "Soil-borne diseases of Egyptian wheat and maize."

Edward W. Osborne and **Jeffrey W. Moss**, Agricultural Communications and Education: \$42,147 for 10 months from Illinois Board of Education for "Science applications in agriculture: physical science course development."

Donald P. Briskin, Agronomy: \$156,000 for 36 months from U.S. Department of Energy for "Mechanism and structure of the plant plasma membrane CA_2 -ATPase."

Janice M. Bahr and **Jane A. Jackson**, Animal Sciences: \$67,000 for 12 months from National Science Foundation for "Regulation of ovulation in the domestic hen."

Janice M. Bahr, Animal Sciences: \$60,000 for 12 months from Biotechnology Research and Develop Corp. for "Sexual differentiation of the chicken: a basis to change phenotypic sex and enhance growth."

Lawrence B. Schook, Animal Sciences: \$150,409 for 12 months from U.S. Public Health Service for "Dimethylnitrosamine effects on cellular immunity."

Hans P. Blaschek, Food Science, and **Roderick I. Mackie** and **Bryan A. White**, Animal Sciences: \$203,000 for 24 months from U.S. Department of Energy for "Genetics of solvent-producing clostridia."

Toshiro Nishida and **Hiro I. Nishida**, Food Science: \$143,616 for 12 months from U.S. Public Health Service for "Role of plasma lipoproteins in atherosclerosis."

Sandra L. Brown and **Louis R. Iverson**, Forestry: \$101,584 for 12 months from U.S. Department of Energy for "Spatial and temporal patterns of biotic exchanges of CO between the atmosphere & tropical landscapes. . ."

Mark B. David, Forestry: \$225,000 for 36 months from USDA for "Organic perspectives of C.N.S. & P. biogeochemistry in a low elevation spruce-fir ecosystem."

Robert Hauser, Agricultural Economics: \$11,014 from UIUC Campus Research Board for "The analysis and design of a cash settlement index for corn and soybean futures."

Leann L. Birch, Human Development and Family Studies: \$80,858 for 12 months from U.S. Public Health Service for "Associative conditioning of children's food preferences."

Roger L. Courson, Vocational Agriculture Service: \$6,749 for 12 months from Illinois Board of Education for "District IV agricultural ed. field advisor education."

S. Safi Korban, Horticulture: \$13,270 from UIUC Campus Research Board for "The development of virus-resistant apples."

Mary Ann Smith, Horticulture: \$9,000 from UIUC Campus Research Board for "Computer vision measurement of control parameters for in vitro production of natural plant pigments."

John M. Swiader, Horticulture: \$5,318 from UIUC Campus Research Board for "Enhancing sweet corn aroma: investigations on the variation and metabolism of dimethyl sulfide and its precursor in shrunken-2 genotypes."

Alan L. Kriz, Agronomy: \$25,000 from UIUC Campus Research Board for "ABA-regulated gene expression in embryos of maize viviparous mutants."

John T. Scott and **David L. Chicoine**, Agricultural Economics: \$7,340 for 12 months from Illinois Department of Revenue for "Farmland assessment: an investigation of costs and soil productivity."

Keith W. Singletary, Foods and Nutrition: \$102,220 for 12 months from U.S. Public Health Service for "Dietary ethanol & initiation of DMBA tumorigenesis."

Gerald L. Riskowski, Agricultural Engineering, and **Harold W. Gonyou** and **Paul C. Harrison**, Animal Sciences: \$96,365 for 10 months from NASA for "Effect of double density caging during space shuttle transport of laboratory rats."

Robert G. Darmody and **Robert E. Dunker**, Agronomy: \$303,100 for 36 months from USDA-CSRS for "Prime farmland reclamation after surface mining."

Robert E. Dunker and **Robert G. Darmody**, Agronomy: \$31,240 for 24 months from USDA-CSRS for "1992 national symposium on prime farmland reclamation."

Keith W. Kelley, Animal Sciences: \$100,000 for 12 months from USDA for "Endocrine regulation of the immune system."

Floyd K. McKeith, **Tom R. Carr** and **Jan E. Novakofski**, Animal Sciences: \$58,002 for 12 months from National Live Stock and Meat Board for "Evaluation of the color, palatability, and nutritional characteristics of different. . ."

Matthew B. Wheeler, Animal Sciences: \$438,090 for 36 months from Biotechnology Research and Development Corp. for "Modification of the TNF alpha gene in swine embryonic stem cells via homologous recombination."

Cynthia J. Erickson and **Jimmy L. Shonkwiler**, Extension: \$2,000 for 5 months from Governor's Rural Affairs Council for "Capitalizing on community strengths."

Robert D. Espeseth and **Peter D. Bloome**, Extension: \$375,772 for 12 months from National Oceanic & Atmospheric Administration for Illinois/Indiana Sea Grant program.

Jimmy L. Shonkwiler, **Marjorie R. Hamann**, and **Jane A. Scherer**, Extension: \$243,750 from Illinois Board of Education for "Consumer and homemaking education program for Illinois disadvantaged individuals."

Dennis R. Thompson and **Jimmy L. Shonkwiler**, Extension: \$23,008 for 12 months from U.S. Air Force for "Expanded food and nutrition education program at Chanute Air Force Base."

George Z. Gertner, Forestry: \$3,488 for 3 months from U.S. Army Construction Engineering Research Laboratory to conduct an analysis of artificial intelligence applications to the land condition trend analysis program.

Gary L. Rolfe, Forestry: \$25,000 for 12 months from Illinois Department of Conservation and \$75,000 for 11 months from an undesignated association for "Development of forest industry export potential in Southern and Western Illinois."

William D. Savage and **Wilmot B. Wijeratne**, International: \$4,000 for 12 months from Land of Lincoln Soybean Association for "Pizza restaurant promotion of soybean products."

Raymond M. Leuthold, Agricultural Economics: \$9,818 from UIUC Campus Research Board for "Trader concentration effects and individual trader returns in the frozen pork belly futures contract."

David R. Purnell, Agricultural Economics: \$7,192 from UIUC Campus Research Board for "Study of international agricultural trade programs of the United States."

John B. Braden, Agricultural Economics: \$10,017 from UIUC Campus Research Board for "Economics of an integrated European environmental policy."

Steven T. Sonka, Agricultural Economics: \$10,014 from UIUC Campus Research Board for "A seed industry analysis in four southern African states."

David L. Chicoine, Agricultural Economics: \$36,900 for 12 months from Tennessee Valley Authority for "Fertilizer tests and demonstrations."

William L. George and **W.R. Gomes**, Administration: \$31,851 for 12 months from USDA for "Cammer research program for minority undergraduate students."

Susan M. Potter, Foods and Nutrition, and **John W. Erdman**, Food Science: \$25,850 for 18 months from Illinois Soybean Program Operating Board for "Plasma lipid lowering effects of differently processed soy products."

Robert P. Bentz, Extension: \$15,279 for 4 months from Illinois Commerce and Community Affairs for "Kids at risk — urban gardening project."

Timothy D. Marty, Forestry: \$9,362 for 8 months from Illinois Department of Conservation for "Survey of forest landowner needs and expectations."

Renovation work on the Animal Sciences Lab is moving along. Asbestos removal is finished, and remodeling on the first

three floors was scheduled to begin in

February, according to **Douglas B.**

Bauling, Illinois Agricultural Experiment Station planning engineer.

Major work to be done will encompass replacing all systems, including heat, air conditioning, electrical and plumbing. "The electrical system was nowhere near adequate" for modern needs, Bauling says.

The remodeling contract states the work will be completed after "420 consecutive calendar days from the date of notice of the award." Since the contract was to have been awarded in January 1992, the work covered by the contract should be completed by the beginning of April 1993.

Because workmen had to break holes in the walls to remove asbestos, all walls will be covered with new drywall. New windows — aluminum instead of wood — will be installed for both lower maintenance costs and energy conservation. The elevator

will also be replaced. This work, however, won't complete the renovation.

"We're still waiting for funds to do the fourth floor and some of the basement," Bauling says. "We'll be able to do some preliminary work on the fourth floor — major mechanical, ducts, piping, and other systems will be there. But we won't be able to finish it without more money."

Fortunately, the bids for the renovation came in on target. "We're in good shape to do three floors," Bauling adds. "We may be able to do some on the fourth floor, depending on how much of the contingency we use. It's always difficult with remodeling work to know what you might uncover when the job is going on."

National Soybean Research Laboratory

"Demolition on the National Soybean Research Laboratory is pretty much completed," Bauling says. "There's still some asbestos abatement work to do."

The College has received funds to do Phase I — remodel the second floor and construct an extension on the south side for mechanical equipment and stairs to serve all four levels. Phase II will start in mid 1992 with remodeling on the first floor and lower level.

"We'll be finalizing plans in the next couple of months," Bauling explains. "Federal funds have been approved."

State funds to complete the renovation, install a tunnel to the greenhouse complex, and construct a new greenhouse are "in the pipeline," Bauling explains. "Most of the state work is programmed as R&R — repair and remodel, rather than new construction — which the campus budgets every year. The soybean lab is on the list but hasn't been specifically funded."

Other work on 'hold'

The planned tunnel from Bevier Hall to the Plant and Animal Biotechnology Laboratory has been funded, but the state has frozen the funds. Work will proceed when the funds are "unfrozen."

Remodeling funds for Turner Hall have also been approved but frozen by the state. The work on Turner Hall is proceeding, however, with College funds that come from grant "overhead" income. The Turner Hall work includes relocating the Department of Agronomy and remodeling the vacated portions of the 4th and 5th floors for the Departments of Forestry and Horticulture. ▼

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W.R. "Reg" Gomes

You've probably heard the story of the seven blind men and the elephant: The blind men didn't know what an elephant was, and each approached it from a different direction. One grabbed the tail and surmised the elephant was like a rope; another came upon a leg and decided the elephant was like a tree; a third found the trunk and assumed the elephant was like a snake; and so on. It's unfortunate that many people who look at the College of Agriculture and the University of

Illinois fall into the same trap. They

see undergraduate instruction. . .

graduate teaching. . . basic research. . .

applied research. . . extension. . .

and believe that somehow, one of

these alone represents what the college is all about; that one of these alone can exist without dynamic interaction with the others.

But that's not true.

Our college has always prided itself on the interest our tenure-track faculty take in teaching and advising undergraduates. And we're investing even more of their time as we explore ways to enhance undergraduate instruction. Teaching the "soft systems" approach to problem solving, for example, demands a lot of time and effort from our faculty. But it will help many of our students get more out of their educational experience at the University of Illinois.

The Functional Foods Initiative provides an example of how basic and applied research from a variety of disciplines can be brought together to address society's problems and offer solutions. Research programs conducted in laboratories throughout the college and the university are being integrated into wide-ranging studies that may change the diets of people around the world. The processes and procedures our scientists develop will be taught to students in our classrooms, and the results of the research projects will be shared with the public through extension education programs.

Cooperative Extension has been a hallmark of our role as a land-grant college. We instituted CES revitalization to help the extension system meet the needs of today's citizens within the constraints of current budgets. But if we didn't have sound research programs providing the

answers to new questions in nutrition, youth programs, and production agriculture, all the revitalization in the world wouldn't help the Cooperative Extension Service continue its unique effectiveness.

Many of the problems we addressed in the past are similar to the current obstacles facing people in developing areas of the world. We can help our neighbors through international programs like the TIPAN project in Pakistan, where we've used our experience in teaching, research, and extension to help build an effective agricultural university. And while we assist others, at the same time we broaden our faculty's knowledge of how answers to others' problems can provide insights into improving our own systems.

Perhaps we all need to look at the college from a systems perspective. We shouldn't simply reduce it into separate components and consider them individually. Rather, we must look at the entire college and realize that it really is more than the sum of its parts—and that each individual part is enhanced by being with, learning from, and interacting with all the others. ▼

On the cover: Janice Bahr, professor of reproductive physiology in the Department of Animal Sciences, in the stacks of the Agriculture Library in Mumford Hall with Yolanda McGowan, then a student in HRFS.

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News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: AgriView, Office of the Dean, 101 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801.

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It started in February 1983, when the UI and Southern Illinois University-Carbondale were selected to design a project to increase the capabilities of a young agricultural institution. Then in November 1983, following an extended design schedule and rigorous review, the two schools, with the College of Agriculture as the lead institution, were awarded a contract by USAID (the U.S. Agency for International Development) for a major institutional development in Pakistan.

The project was TIPAN (Transformation and Integration of the Provincial Agricultural Network). The institution was the Northwest Frontier Province Agricultural University in Peshawar.

The project was designed to promote advanced faculty training, curriculum revision, the admission of women, and changes in administrative structures and procedures at NWFP AU. In addition, the provincial Department of Agriculture was merged with the agricultural university.

The USAID contract with the UI has been revised a number of times until it exceeded \$26 million and extended into 1994. More extensions aren't expected, however. That's one reason why Abdur Rahman Khan, vice chancellor of NWFP AU, was on campus in July as a member of an executive delegation from the government of NWFP. He's interested in continuing the relationship between the UI and his university.

Khan sees TIPAN as a vehicle for socio-economic improvements in the province; its success will lead to replication in other provinces in Pakistan. "When the USAID contributions are gone, we need to be looking for alternative sources of funding for institution building," he says. "Our government is committed to sustaining the program."

India adopted the model in the 1960s, and it took them 20 to 25 years to be successful, Khan says. "We only started in 1984," he adds. "This is our eighth year, and USAID assistance

will continue for two more. But we need to think about how we can sustain our linkages with the University of Illinois in the future. We must keep informal linkages. It's in our mutual interest."

Khan hopes ARP II, a new project funded by World Bank, will help keep the TIPAN project going for four more years after USAID funding ends in 1994. "We proposed the University of Illinois as the partner for the World Bank program," he says. "This could increase our formal link."

Khan explains that 70 to 80 percent of the population in NWFP is involved in agriculture. Still, they are not producing enough, even with irrigated production. Through TIPAN, the Pakistani government is introducing the land-grant university model of teaching-research-extension to help improve productivity.

The training, arranged by **John W. Santas**, associate director of International Agriculture, "has been most successful," Khan says. "We are fully satisfied with the support given by the University of Illinois. We appreciate the efforts of the University of Illinois, of Dean Gomes and John Nicholaides, and especially the excellent job done by John W. Santas."

Khan was accompanied on his visit in July by Iftikar Ahmed Khan Jhagra, provincial minister for food and agriculture, Khalil Mansoor, provincial secretary for food and agriculture, and Abdul Qayyum Khan, USAID project officer from Islamabad. While in Champaign-Urbana they met with NWFP AU faculty members who are studying on the UI campus.

From the UI campus, the delegation was scheduled to visit other NWFP AU faculty studying in California and Colorado. In those states, the geography and growing conditions, as well as horticultural crops in California and forest products in Colorado, are similar to Northwest Frontier Province.

Their final stop was Washington, D.C., where they were to meet with USAID staff to discuss the findings of a recent TIPAN project evaluation. "The findings are very, very positive," Khan says.

The evaluation report says "the TIPAN project and the NWFP Agricultural University have become the role models for the reform of education in the nation's agricultural colleges. There are a number of indications that the education reforms undertaken by the AU under the auspices of the TIPAN project represent significant progress toward achieving the purpose of the project."

The report adds that "substantial progress had been made in improving the relevance and quality of research in the province." ▼



Raymond A. Woodis (left) of the UI Office of Agricultural Communications and Education confers with personnel at an agricultural research station in the Northwest Frontier Province. One of a number of UI specialists who went to Pakistan on short-term assignments, Woodis conducted workshops in technical writing for station personnel.

The agricultural sciences are increasingly influenced by economic, social, and cultural forces that require new ways of thinking and learning. As a result, the college is evaluating a teaching approach that helps students explore the relation-

ships between agriculture and other aspects of society. "It's a soft systems approach as opposed to the hard systems of natural sciences. It's holistic," says William L. George, associate dean and director of academic programs in the college.

Holism views the world conceptually as a set of structured systems or "wholes" that maintain their identity under a range of conditions and display general properties that arise from their "wholeness." The major propositions are that everything is connected with everything else and that the whole is different from the sum of its parts.

Strictly empirical hard systems reduce problems into component parts that can generally be expressed in mathematical models. Soft systems, on the other hand, take a holistic approach that considers relationships that aren't necessarily quantifiable and can't be reduced. Soft systems assumes that all the characteristics of a whole cannot be predicted by breaking it down and evaluating its components.

Teaching this holistic perspective can help students develop new insights into the relationships between people and their environments.

"Most of our students have science backgrounds where they've learned the hard systems approach; how to reduce problems into small parts and analyze them," George says. "We want to introduce our students to soft systems, which is more of a social sciences approach to learning."

Soft systems is an "approach to problem solving of human activities," according to Michael R. Murphy, associate professor in Animal Sciences. Murphy and Lyle P. Fettig, professor in Agricultural Economics, teach AgEc/AnSci 199J, an experiment in teaching soft systems. They prepared for teaching the course by attending a faculty training workshop on systems approaches held at Colorado State University in 1986.

"We're teaching the notion of people working together," Fettig says. "We're blending learning styles, backgrounds, knowledge. Sometimes students want the right solution, but there are different ways of looking at things; of solving the same problem. Our intent is to explore goals and find ways to improve the problem situation."

"The emphasis is on experiential learning," adds Murphy, who believes with Fettig that the class should be offered to students early in their college experience to be most effective. The course provides first-year students "context for their broader education," he explains. "For example, it can help them better appreciate the LAS courses they take across campus."

AgEc/AnSci 199J was first offered to second-semester first-year students in the spring of 1989 and again in the spring of 1991 as a one-hour class; it met for two hours once a week for half a semester. Last spring it was changed to a two-hour class with 21 students meeting in a seminar format each week for the entire term.

"Changing the class from one hour to two hours was very beneficial," Fettig says.

"It allowed us to do three things: One, to develop ideas more fully and allow more practice on applications in class; two, to bring in resource people from production agriculture and food marketing and distribution; and three, to do group project presentations."

Fettig and Murphy invited John Rundquist, a prominent hog producer from Butler, and Gary Gionnette from Super Valu, a major grocery wholesaler, to speak to the class. "Having people like this come really opened students' eyes," Fettig says. "They could see applications of the systems ideas in the real world."

The semester begins by focusing on the concepts of learning and of problem solving as two aspects of the same fundamental process. After their learning styles are assessed, students are assigned to small groups that represent diversity of styles. The learning experiences arise from working in groups, which are often rearranged so students aren't in the same groups the entire semester.

The teaching approach encourages group activity and teamwork. Case studies provide opportunities for students to view real-life issues and to examine the diverse views of the organizations and individual citizens concerned with the issues. The concept of soft systems goes beyond scientific fact and considers the social and cultural aspects of a situation.

The approach compares the real world and the abstract world, Fettig says. "The real world is depicted in mind mapping and rich picturing; the abstract world is represented by root definitions and conceptual models of the relevant systems."

Learning Styles Inventory/The Learning Cycle

The Kolb Learning Style Inventory measures an individual's orientation toward finding out about and taking action on experience. Finding out and taking action combine to produce four styles of learning, each connected with a set of competencies. These learning styles then influence individual emphasis in the learning cycle.

The learning cycle is a circular model that combines a **concrete experience — abstract conceptualization** axis with a **reflective observation — active experimentation** axis. According to the model, learning, problem solving, knowledge creation, and purposeful action are dimensions of the same process. ▽

The students compare the model with the real world and consider solutions that are feasible and desirable."

One objective of offering AgEc/AnSci 199J is to determine how this alternative learning process could best be developed. The systems approach lends itself well to team teaching which assures that more than one perspective is presented.

"The facilitators are essential to the course," Fettig says. "We need people to answer questions and provide regular and prompt feedback both in general discussions and in group sessions."

"The course is writing intensive," Murphy adds. "There are weekly micro-themes for the first 10 weeks. Then there's an individual course report and a group report on the case study. It would take more faculty to serve the entire first-year class. It's also faculty intensive."

"Implementation could be difficult because of the extreme amount of faculty time involved," George says. "We have to decide if this ought to be a full course or offered as a module in existing introductory courses in the sciences. We'd like to offer it to all our students, not only 20 each year."

The systems approach has gained wholehearted support from assistant dean **Warren K. Wessels**. "Social sciences can be harder than physical sciences," he says. "There are more variables you can't control. Soft systems is a way of attacking a problem. We're using it for teaching a different approach to problem solving." ▼

Administrative Appointments

Patricia J. McBride was named assistant dean of academic programs for the college effective January 21, 1992. She has primary responsibility for students and programs in the School of Human Resources and Family Studies. McBride received B.S. and M.A. degrees in home economics from Ball State University, Muncie, Indiana. Her previous positions included consumer information specialist with Atlanta Gas Light Company, Atlanta, Georgia, and career marketing coordinator for the American Home Economics Association, Washington, D.C.

Donald C. Thompson was named assistant to the dean for minority affairs in the college as of January 21, 1992. His responsibilities include helping recruit minority students in the food and agricultural sciences and organizing and co-directing the Minority Apprenticeship Program and Summer Research Opportunities Program for the college. He earned his B.S. degree in agricultural education from North Carolina A&T and his M.S. and Ed.D. degrees in agricultural education from the UI. He taught high school agriculture in North Carolina and was most recently on the faculty of the University of Florida. ▼

One of the first commercial

products that come from

"designer" foods will likely

be tomatoes.

Farmers pick tomatoes

green so they can maintain

firmness during harvest and

transportation. Green picking,

however, prevents tomatoes

from developing the flavor and

color (as well as nutrient value)

consumers prefer. Now, how-

ever, a new tomato is waiting

in the wings.

Calgene, a genetic

engineering company in

California, has developed

a tomato variety that blocks

the gene that allows the fruit

to soften. By raising this

variety, tomato growers

will be able to allow the fruit

to ripen on the vine and

develop the color and flavor

consumers want. Then, they'll

be able to pick and ship

these tomatoes without their

losing firmness.

Vitamins. Proteins. Fats. Carbohydrates. We've heard about them all our lives.

Now something new is looming on the horizon. They're called nutraceuticals. . .

bioreactive foods. . . phytochemicals. Not necessarily nutrients, these naturally

occurring chemicals or food components may prevent or cure diseases. Our diet

is chemically complex. It shouldn't be surprising that some things we eat have

therapeutic value. But now researchers are delving deeper into what we eat to find

chemical components of food that may affect health in ways we don't really understand yet.

Consumers want healthy lifestyles, and the food industry wants to produce value-added food products that satisfy consumer demands. These trends call for new and credible nutrition and preventive health strategies. The competitive challenge for the U.S. food and agriculture industry is clear.

Scientists are looking beyond nutrition for links between diet and disease. They first want to determine more precisely which foods and ingredients (alone and in combination) offer significant preventive properties; then, they want to develop foods with enhanced levels of those substances. Called designer foods, functional foods, or nutraceuticals (a combination of nutrition and pharmaceutical), the results are ordinary foods with naturally occurring components that can prevent or cure disease.

"Functional foods" has emerged as a new UI term in the foods and nutrition field. It generally focuses on the role of non-nutritive dietary components in health.

Because food is big business in Illinois, a University of Illinois retreat at Allerton Park in May brought together faculty from both the Urbana and Chicago campuses to

collaborate on an intercampus initiative.

"Functional Foods for Health: A Joint UIC-UIUC Program" grew from the Division of Nutritional Science joint Ph.D. curriculum between the Chicago and Urbana campuses.

John W. Erdman, professor of food science and director of the Division of Nutritional Sciences is one of the forces behind the initiative.

"There are two ways to enrich or reduce naturally occurring components of foods for a health purpose," Erdman says. "One is to genetically change the plant or animal to produce more or less of the component; the second is to change the composition of the food through selective food processing technology."

UI research is focusing on changing genetics—particularly of soybeans, which have been associated with lowered disease risks. Scientists have identified the phytochemical constituents of soybeans, and they're currently working to identify the components which have an impact on health.

Geneticists have been modifying plants and animals through breeding programs for years. Lately, they've added biotechnology to their bag of tools to improve efficiency and to produce changes that aren't possible through traditional

breeding methods. The catch, though, is that researchers looking at functional foods aren't looking for the same factors geneticists addressed in the past.

"Much of what we're talking about has not been done yet," says **Jack M. Widholm**, professor of agronomy and an expert in genetic engineering. "The plant components that we're considering probably have not been looked at in the past. We may have to go back to work we've done before and look again, and we may find interesting differences that we weren't looking for before."

"If certain components of plants are identified, we can change plants to produce them," Widholm adds. "If they tell us what they need, some day in the future—in six months, six years, whenever—we should be able to do it."

One of the advantages of modifying plants and animals through genetic engineering is that a change only has to be made once and it can be replicated in future generations. The process is to find and identify the desirable gene and put it into or enhance it in a new product, which may actually be a variation of an existing product.

"We're combining a lot of current technologies from different fields to focus on enhancing the healthfulness of foods," Erdman says. "We've moved past the traditional 'our' research into truly interdisciplinary research. The program is faculty-driven, which gives it momentum."

"We're enhancing the product with expertise not generally found in a college of agriculture," Erdman says of the initiative. "We're looking at nutrition and health aspects of food to produce long-term funding and link expertise on both campuses."

The research is "question driven," he explains. "It's fundable work we want to do, and one lab can only answer part of the question. The UI program offers more talent and a better array of talent—and it's better set to take advantage of opportunities in functional foods—than anywhere else in the country." ▼

Urbana & Champaign campuses offer combined strengths

Research centers around the world are focusing on the impact of bioreactive food components on cancer, heart disease, diabetes, and aging. Their findings will form the basis for a new regulatory framework for accepting health benefit claims associated with whole foods and food components.

The Functional Foods Initiative combines expertise from agriculture and medicine along with other disciplines to study how naturally occurring components in foods may protect humans from disease and how these components can be modified in food systems.

Each campus contributes unique strengths.

- long-term cereal grain and horticulture research
- the ability to "make products"
- toxicology
- human nutrition and feeding studies
- agricultural marketing
- food technology
- pharmacology program on natural products chemistry
- epidemiology
- toxicology
- human nutrition program and feeding studies

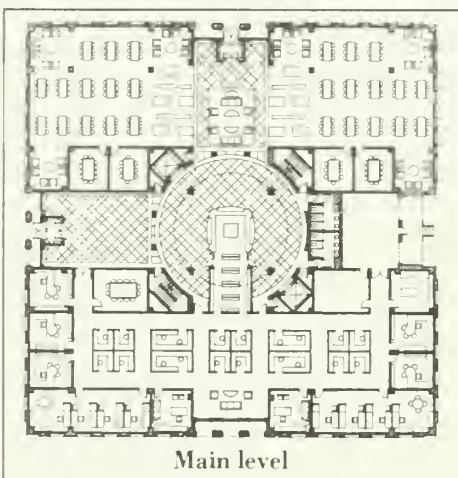
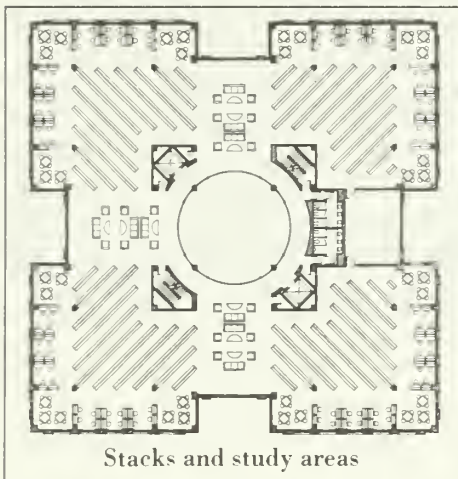
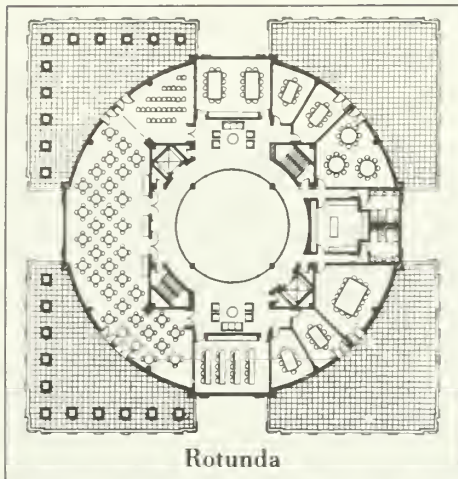


John Erdman works with Tiffany Bierer, a graduate student in Food Science, separating carotenoids from carrots by HPLC (high pressure liquid chromatography). Carotin-containing foods have been shown to reduce the risk of lung cancer.

New Agriculture Information
and Alumni Center
on the way

It's going to happen.

It won't be long now, and the long-awaited College of Agriculture library, computer, and alumni building will be a reality.



Since the Funk family gave the first

\$1 million in 1986, the college has

quietly been planning for the time

when a new library building would

take shape in the heart of the ag

campus. A second \$1 million gift

last spring has brought total gifts

and pledges to more than \$3 million.

Now, it's time for the next step:

a vigorous fund-raising effort to

raise \$4 million more. "We envision

a library that will cost in the neigh-

borhood of \$14 million," says

Dean W.R. "Reg" Gomes.

"Our plan is to raise half that amount from private sources and then ask the state to match it. That means we'll need \$7 million. And we're almost halfway there."

"We're excited about the possibilities," adds Lynette Marshall, director of resource development.

"We have many graduates who have expressed interest in helping us reach our goal."

Marshall explains that the Office of Resource Development will begin a fund-raising campaign among college friends and alumni later this fall. The kick-off is set for November 15 in the Krannert Center for the Performing Arts.

College faculty and staff will be asked for their pledges before the public campaign begins.

"It's important that we can show potential contributors that those of us most closely associated with the college are willing to contribute to this effort," Marshall explains.

"The more of us who display our commitment to improving the college, the more of our friends who will join in and help."



This architect's rendering shows the Agriculture Information and Alumni Center from the west, with Mumford Hall on the left and the Agricultural Engineering Sciences Building on the right.

The Agriculture Library has been located in Mumford Hall for about 70 years, and it's run out of space. Of the 200,000 volumes that belong to ag library, only 60,000 are actually

in Mumford Hall. The rest are in other libraries—including the main library—and some are even in storage. The Home Economics Library has been in Bevier Hall since 1957, and it also has materials in other locations.

"There's no room to grow," Marshall says. "The new building is really needed to help us get ready for the 21st century."

The idea for a new agriculture library building first arose during the Food For Century III campaign that began in 1976. That program generated Turner Hall Phase II, the

Agricultural Engineering Sciences Building, the Plant Sciences Laboratory, and the addition to the Animal Sciences Laboratory. The library building didn't make it.

Plans for the library call for a building with 50,000 square feet of usable space on five floors. It will include space for library personnel, open stacks, study areas, and room for the college's computer laboratories now located in the soon-to-be-raised Ornamental Horticulture building.

"We've planned a building that will satisfy all our current needs and offer us room to grow," Gomes says. "It won't be elaborate, but

it will be attractive, inviting, and functional."

If contributors are as generous as the college expects, pledges could be large enough by spring to

have the library included in the university budget for fiscal 1994. That could mean groundbreaking as early as Fall 1993 and completion three years later.

"We're asking for pledges of up to three years," Marshall says. ▼



More than 120 years service to the College of Agriculture are represented by these three 1992 retirees (from left to right): Ben Jones, Jim Roush, and Ted Curtin.

The associate director of the Agricultural Experiment Station and two faculty members—each with more than 40 years' service to the UI—lead the list of 42 individuals who retired from the College of Agriculture during the past year.

Benjamin A. Jones finished a 41-year career in the college—22 in engineering and 19 years as associate director of the experiment station—when he retired on September 1.

James R. Roush, professor of agricultural marketing in the Department of Agricultural Economics, retired on August 20 with 42 years' service, and **Theodore W. Curtin**, assistant professor of forestry extension in the Department of Forestry, compiled 40 years at the UI before he retired on September 30, 1991.

With the exception of 27 months at the University of Vermont as assistant professor and "the extension ag engineer," Jones' entire academic career (both as student and faculty) was at the UI.

"I took my master's degree and went to Vermont for 27 months," Jones says. "I learned an awful lot there. I came back because Illinois offered me a nine-month teaching appointment that would give me time to work on my Ph.D." He switched to a 12-month teaching and research appointment in 1954 and completed his Ph.D. in 1958.

Jones became associate director of the experiment station in 1973. "I've enjoyed doing what I've been doing, and I've had fun doing it," he says.

Other retirees in the college during the past year include:

- 37 years -- M. Dale Bateman, extension adviser/agriculture, Douglas County, CES
Gerald L. Ross, agronomist, Agronomy
- 36 years -- Arthur J. Muehling, professor, farm structures extension,
Agricultural Engineering
- 35 years -- Mildred E. Goff, administrative secretary, Food Science
Marcia K. McDuffie, secretary, Food Science
Lloyd D. Witter, professor, food microbiology, Food Science
- 33 years -- David B. Dickinson, professor, vegetable crops, Horticulture
Donald E. Kuhlman, program leader, environmental issues,
Agricultural Experiment Station
Robert M. Wetherell, extension adviser/agriculture, Clark County, CES
- 32 years -- John W. Courtner, professor, fruit and vegetable crops extension,
Horticulture
Diego Segre, professor, microbiology and immunology,
Veterinary Research and Extension
- 31 years -- Malcolm C. Shurtleff, professor, diseases of turf and ornamental crops
extension, Plant Pathology
- 28 years -- Harold S. Butler, natural science technical assistant, Agronomy
Charles S. Koenig, extension adviser/agriculture, Wabash County, CES
Elmer E. Rankin, extension adviser/agriculture, Sangamon County, CES
- 26 years -- Vernon L. Brazle, assistant professor, agricultural communications,
Agricultural Communications and Education
James A. Fizzell, extension adviser/horticulture, Cook County, CES
Richard P. Kesler, professor, farm management, Agricultural Economics
- 25 years -- Mary Hindelang, secretary, Green County, CES
Sylvia Pletcher, secretary, Kendall County, CES
- 24 years -- Beverly J. Kruse, extension adviser/home economics, Stephenson County, CES
- 23 years -- Lee K. Freedlund, extension adviser/FBFM, CES
Patricia Obradovich, secretary, Tazewell County, CES
- 22 years -- Thomascean Brandon, extension adviser/EFNEP, Cook County, CES
- 21 years -- Robert P. Bentz, associate director, Cooperative Extension
Kristin M. Ernst, extension adviser/home economics, Sangamon County, CES
Carla S. Fulton, extension adviser/home economics, Kane County, CES
- 20 years -- Ruth P. Hay, extension adviser/youth, Cook County, CES
- 19 years -- Mary E. Fouts, extension adviser/home economics, Tazewell County, CES
Martha J. Milligan, secretary, Ford County, CES
- 18 years -- Mary A. Wagner, extension adviser/home economics, Marion County, CES
- 17 years -- Aurettia J. Kobel, secretary, Animal Sciences
- 16 years -- Doris E. Hunter, community worker, Cook County, CES
- 14 years -- Emily M. Weary, admissions and records officer, Academic Programs
- 12 years -- Gerald G. Gast, extension specialist/4-H/youth, Cooperative Extension
James L. Harden, extension adviser/youth, Cook County, CES
- 11 years -- Violet L. Meyer, secretary, Kane County, CES
- 8 years -- Jane C. Vest, work program participant, Macon County, CES
- 5 years -- Richard D. Brown, accounting technician, Cooperative Extension

Large Flowering Shrubs for the Midwest by Sharon Morrissey and **Floyd A. Giles**, Department of Horticulture, was chosen for the 1990 Notable Documents List. These awards are given by the U.S. Government Roundtable of the American Library Association. The announcement was published in the May 15, 1991 *Library Journal*.

Karen Gehrt, Cooperative Extension Service, was awarded a Greenwood Doctoral Fellowship from the National Association of Extension Home Economists. The \$300 fellowship provides for continuing education and is one of four study grants given annually to outstanding county home economists.

Jack M. Widholm, Department of Agronomy, received one of four UI College of Agriculture Alumni Association Awards of Merit at the association's annual meeting in February. The awards are presented to successful College of Agriculture graduates who have contributed to agriculture and to the public good.

Michael E. Irwin, Office of Agricultural Entomology, has been elected a member of the governing board of the Entomological Society of America.

Clarice Lewis, community worker for the Cooperative Extension Service in East St. Louis, and **Ruth E. Sharpton**, administrative secretary, stenographic, in the agricultural law division of the Department of Agricultural Economics, were honored as recipients of the 1992 Chancellor's Distinguished Staff Awards. They were nominated by co-workers or supervisors, evaluated by a selection committee, and approved by the campus director of personnel services, the vice chancellor for administrative affairs, and the chancellor.

C. Chris Doll, Cooperative Extension Service area adviser for fruits and vegetables, received a 1992 Academic Professional Excellence Award. He was one of three winners on the Urbana-Champaign campus. Doll was recognized for his leadership and extension teaching that have "enhanced the quality of life for both growers and consumers. He cares about people, and he especially enjoys helping farmers and marketers to help themselves."

Jerry W. Robinson Jr., Department of Agricultural Economics, was recognized for "outstanding achievements in rural community development in Illinois" at the statewide Rural Community Development Conference in Springfield on March 17. The award was sponsored by the Illinois Rural Affairs Council, the Illinois Institute for Rural Affairs, and Rural Partners. Robinson is program leader for the Rural Partners/Kellogg program "Helping Rural Communities Prepare for Economic Development."

Roger L. Courson, Vocational Agriculture Services, received the Friends of Vocational Education Award from the Illinois Vocational Association. This honor recognized his dedicated, continuous service to advance vocational education in Illinois.

William L. George, associate dean and director of academic programs, received the 1992 Outstanding Leadership Award from MANRRS, the national society of Minorities in Agriculture, Natural Resources and Related Sciences. Presented at the 1992 MANRRS Conference, April 3-4 at Purdue University, the award was given for outstanding leadership in the development and advancement of programs designed to increase minority participation in the food and agricultural sciences.

Fourteen Information Services staff members in the Office of Agricultural Communications and Education were honored in an international critique and awards program of the Agricultural Communicators in Education during the ACE convention in Washington, D.C. this summer.

Douglas D. Peterson, Tina M. Prow, Gary L. Beaumont, Sandra R. Casserly, Robert D. Sampson, Robin G. Goettel, E.J. Bunzick, Marisa R. Meador, and David A. Riecks received first-place honors for writing within a specialized publication for "Who's Raising Our Kids?" tabloid published in November, 1991.

Tina M. Prow and Nancy J. Loch earned first place in the one- to three-color periodicals category for "Agro-ecology News and Perspectives: Science and Education for a Sustainable Agriculture" newsletter.

Gary L. Beaumont, Randall L. McCabe, Jeff Cronenberg, Steven R. Parker, and R. Grear Kimmel received a second place award in the television special program or documentary category for "The Price of Bounty" documentary first aired in November 1991.

Bruce J. Sherrick, Department of Agricultural Economics, was awarded the national outstanding student advisor award at the 1992 convention of the National Agricultural Marketing Association in Kansas City.

W.R. "Reg" Gomes, dean of the college, was selected by the faculty of the School of Agriculture at Purdue University to receive its Distinguished Alumni Award. He was one of the first recipients of this new award, which was presented on April 24 as part of the spring alumni gathering on the Purdue campus.



The 1992 Paul A. Funk Recognition Award winners were (left to right) Keith W. Kelley, Lawrence B. Schook, and Leann L. Birch.

• • •

Leann L. Birch, professor of human development in the School of Human Resources and Family Studies, **Keith W. Kelley**, professor of immunophysiology in the Department of Animal Sciences, and **Lawrence B. Schook**, professor of molecular immunology in the Department of Animal Sciences, were honored with Paul A. Funk Recognition Awards at the college's annual recognition banquet on March 5.

Birch is regarded worldwide as a leading scholar in children's food preference. Her research serves as the basis for nutrition education programs targeted to preschool children.

Kelley is an internationally recognized authority on how the immune system affects domestic animals. He was the first to show that the age-associated decline could be rejuvenated by growth hormone, leading others to investigations in older adults and in patients with AIDS.

Schook is recognized as a world authority in molecular immunology and genetics. He has mapped and identified genes involving disease resistance, growth, and development of swine.

The Funk Awards are supported by the Paul A. Funk Foundation of Bloomington, as a memorial to the late Paul A. Funk, who attended the college as a member of the Class of 1929.



The 1992 Faculty Award for Excellence winners were (from left to right) Harris A. Lewin, Malcolm C. Shurtleff, James B. Sinclair, James R. Roush, Dan B. Faulkner, and J. Bruce Litchfield.

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Six members of the college faculty were presented Faculty Awards for Excellence on March 5. The awards recognize outstanding professional achievement and demonstrated excellence in teaching, research, or extension.

James R. Roush, professor of agricultural economics, received the Senior Faculty Award for Excellence in Teaching. Roush was cited as "an outstanding teacher consistently ranked by students as among the top three instructors in agricultural economics."

Malcolm C. Shurtleff, professor of plant pathology, was presented the Senior Faculty Award for Excellence in Extension. He has more than 1,000 publications to his credit, including the Plant Diseases section of the *Encyclopaedia Britannica* and five other encyclopedias.

Dan B. Faulkner, associate professor of animal sciences, received the Young Faculty Award for Excellence in Extension. He was cited for his programs in beef-cattle production and for his research in cow/calf management systems.

James B. Sinclair, professor of plant pathology, was presented the Senior Faculty Award for Excellence in Research. He is internationally recognized for his major contributions in soybean disease epidemiology and control and for describing how bacteria and fungi infect soybean seeds.

Harris A. Lewin, associate professor of animal sciences, received the Young Faculty Award for Excellence in Research. His work with bovine leukemia virus, a retrovirus, has been recognized for its relevance to clinical features of other retroviruses, including AIDS.

J. Bruce Litchfield, assistant professor of agricultural engineering, received the Young Faculty Award for Excellence in Teaching. He has developed three core courses in food engineering and has identified career opportunities for graduates with the food and process engineering minor.

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Lyle P. Fettig, professor of agricultural economics, was presented the Karl E. Gardner Outstanding Undergraduate Adviser Award by the college. The award was established by George R. and Arthur H. Bunn of the Bunn-O-Matic Corporation of Springfield to honor Gardner, a former associate dean and director of resident instruction in the college. Fettig was cited as "an effective, energetic adviser of students for 29 years. He has advised undergraduate students, guided graduate students, assisted colleagues, and nurtured student clubs."



1992 Academic Professional Awards for Excellence were presented to (left to right) Alan Otterbacher, Catherine R. Mauck, James E. Nugent, Gary D. Bickmeier, and Mary Lou Carlson.



Dean Gomes with David J. Williams (center), the 1992 John and Henrietta Downey Spitler Teaching Award winner, and Lyle P. Fettig, the 1992 Karl E. Gardner Outstanding Undergraduate Adviser Award recipient.

David J. Williams, professor of horticulture, was presented the college's John Clyde and Henrietta Downey Spitler Teaching Award. The award was established by Mildred Spitler Johnson of Urbana in honor of her parents. Her father was associate director of extension at the UI when he retired in 1949. Williams teaches nursery management and arboriculture to undergraduate students and has developed large workshops and schools for nursery and landscape professionals. He leads a statewide educational program on recycling and using solid landscape wastes.

Catherine R. Mauck, home economics adviser with the Cooperative Extension Service in Madison County, was cited for developing educational programs in family living, mental health, and foods and nutrition and for recruiting, training and organizing volunteers to give citizens the opportunity to get involved.

Mary Lou Carlson, Cooperative Extension adviser in Peoria County, and James E. Nugent, area adviser for communications in Peoria, were recognized for "exceptional innovation and creativity" for their work in solid waste management education. They developed a recycling and waste-management educational program in Peoria County.

The College of Agriculture Office of Academic Programs received the departmental UIUC TRIO/EOP Recognition Award at the Sixth Annual National TRIO Day Celebration on February 27. The award was presented in recognition of continuous support for the principles of educational opportunities for minority and low-income students. William L. George, associate dean and director of academic programs, accepted the award.

John W. Erdman Jr., Department of Food Science, was elected a Fellow of the Institute of Food Technologists. The award was presented at the annual institute meeting in June.

Five Academic Professional Awards for Excellence were presented for sustained excellence or for innovative and creative programs in the college.

Alan Otterbacher, principal research specialist in the Department of Horticulture, was recognized for "sustained excellence in guiding a dynamic small fruit and viticulture research and demonstration program."

Gary D. Bickmeier, agricultural adviser with the Cooperative Extension Service in Scott County, was presented an award in recognition of his work in developing the Sustainable Agriculture Youth Research Program designed for 4-H and FFA youth.

Three Department of Animal Sciences faculty were recognized at the American Dairy Science Association annual meeting in Columbus, Ohio, on June 23. Jimmy H. Clark was installed as president of the American Dairy Science Association. Michael F. Hutjens received the Nutritional Professionals, Inc. Applied Dairy Nutrition Award for outstanding achievement in research, teaching, extension, and/or industry. George C. Fahey received the Pioneer Hi-Bred Forage Award for outstanding research and/or educational contributions in the area of forage production, processing, storage, or utilization.

Two College of Agriculture faculty were honored by the university for achievements in teaching. Darrell A. Miller, Department of Agronomy, received one of two UIUC Oakley-Kunde Awards for Excellence in Undergraduate Education. The award is for excellence within the broad area of undergraduate education. This year's focus was for excellence in academic advising. Shelly J. Schmidt, Division of Foods and Nutrition, received a UIUC Award for Excellence in Extramural Teaching.

Research programs in the College of Agriculture are enhanced considerably by gift- and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the college, including the following:

William H. Peterson and Ted L. Funk, Ag Engineering: \$19,427 for 12 months from the National Food and Energy Council for "Evaluation of Solar-Generated Electricity for Utility Service to Remote Loads."

Sharon M. Donovan, Foods and Nutrition: \$30,000 for 12 months from the International Life Science Institute and Foundation for "Hormonal Therapy During Recovery from Neonatal Malnutrition: Effects on Growth, Body. . ."

Michael A. Mazzocco and Steven T. Sonka, Ag Economics, and Frederick W. Winter, Business Administration: \$72,000 for 24 months from USDA for "A collaborative approach to enhancing agribusiness management education."

Jerry W. Robinson, Ag Economics: \$75,000 for 12 months from Illinois Board of Higher Education and \$15,000 for 7 months from the Governor's Rural Affairs Council for "Helping rural communities prepare for economic development."

Bruce J. Sherrick, Ag Economics: \$19,300 from USDA for "Aquaculture economics, marketing, and policy for the North Central Region."

Leslie L. Christianson, Gerald L. Riskowski, and Gwojenn J. Wu, Ag Engineering: \$43,932 for 12 months from the National Science Foundation for "Experimental and numerical study of room air and air containment distribution."

A. Lane Rayburn, Agronomy: \$87,655 for 45 months from Illinois Department of Energy and Natural Resources for "Impact of fly ash disposal on plant development."

Harold W. Gonyou and Paul C. Harrison, Animal Sciences, and **Gerald L. Riskowski**, Ag Engineering: \$16,500 for 12 months from the National Pork Producers Council for "Reducing heat stress in sows by allowing behavioral thermoregulation."

Christine M. Todd, Human Development and Family Studies: \$28,345 for 9 months from the State of Illinois for "Illinois child care newsletter" and \$135,608 for 9 months from the State of Illinois for "School-age child care network."

Edward W. Osborne and Jeffrey W. Moss, Ag Communications and Education: \$16,633 for 6 months from Illinois Board of Education for "Science applications in agriculture: BSAA - animal science course development."

Michael E. Irwin and Catherine E. Eastman, Ag Entomology: \$28,600 for 12 months from USDA for "Barley yellow dwarf epidemiology."

Frederick E. Below, Jr., Agronomy: \$60,000 for 36 months from TVA for "Evaluation of genotypic variation in maize response to enhanced ammonium supply."

Gary L. Rolfe, Forestry: \$82,000 for 9 months from Illinois Department of Conservation for "Continuing assistance and resource education for Illinois" and \$64,215 for 9 months from Illinois Department of Conservation for "technical transfer to local governments, investors, and the wood products industry to promote rural economic development."

Alan L. Kriz, Agronomy: \$88,671 for 12 months from Midwest Plant Biotechnology Consortium for "Enhancement of nutritional quality of maize grain through genetic engineering."

Munir Cheryan, Food Science: \$30,000 for 12 months from Illinois Department of Energy and Natural Resources for "Increasing the efficiency of ethanol production through the use of a membrane technology."

Leslie L. Christianson, Ag Engineering: \$200,000 for 8 months from Illinois Department of Commerce and Community Affairs to establish the Bioenvironmental Engineering Research Lab.

Harris A. Lewin and Matthew B. Wheeler, Animal Sciences: \$57,593 for 12 months from Biotechnology Research and Development Corporation for "Genotyping of oocytes: a method for prezygotic selection."

Jan E. Novakofski, Animal Sciences: \$80,000 for 12 months from Illinois Department of Commerce and Community Affairs for "Application of ultrasonic technology to major problems in the meat animal industry."

M. Dolores Berber-Jiménez, Food Science: \$12,000 for 12 months from National Science Foundation for "Structural determination of anthocyanins."

Peter J. Barry, Ag Economics: \$118,402 for 12 months from USDA for the Center for Farm and Rural Business Finance.

Dale I. Edwards, Plant Pathology: \$36,822 for 4 months from Illinois Soybean Program Operating Board for "Support of research and education program in nematology."

Gary L. Beaumont and Douglas G. Peterson, Ag Communications and Education: \$15,000 for 12 months from USDA for "This Land: 50 ways to protect groundwater."

J. Kent Mitchell, Ag Engineering, and **Allan S. Felsot**, Ag Entomology: \$60,000 for 24 months from USDA for "Agricultural practices for water quality improvement."

John M. Gerber, Experiment Station: \$110,500 for 24 months from USDA for "Participatory research and education network for sustainable agriculture in Illinois."

Timothy R. Ellsworth and Charles W. Boast, Agronomy: \$56,655 for 12 months from USDA for "Seasonal variations in preferential flow under corn and soybean cropping."

Richard M. Vanden Heuvel, Richard L. Mulvaney, and F. William Simmons, Agronomy: \$35,048 for 12 months from USDA for "Defining limits of natural abundance ¹⁵N value methodology to identify and quantify sources of. . ."

Jan E. Novakofski, Animal Sciences, and William D. O'Brien, Electrical and Computer Engineering: \$320,000 for 36 months from National Live Stock and Meat Board for "Development of an ultrasound based grading system."

Jimmy L. Shonkwiler and James D. Oliver, Extension: \$55,000 for 12 months from The Retirement Research Foundation for "Willing and interested seniors for education."

Mark B. David, Forestry: \$25,941 for 12 months from US EPA for "A field study of sulfur and carbon processes which regulate surface water acidity."

Harold W. Gonyou and Paul C. Harrison, Animal Sciences, and **Gerald L. Riskowski**, Ag Engineering: \$100,000 for 12 months from NASA @ Ames for "Design and evaluation of spatially enhanced caging for laboratory rats at high density."

Steven T. Sonka, Ag Economics: \$43,126 for 12 months from National Science Foundation for "Climate prediction, climate change, and agriculture."

Sarahelen R. Thompson, Ag Economics: \$20,000 for 9 months from Illinois Department of Commerce and Community Affairs for "The Illinois produce growers study."

Leslie L. Christianson, Ag Engineering: \$8,500 for 12 months from National Science Foundation for "Experimental and numerical study of room air and air contaminant distribution."

Roscoe L. Pershing, Ag Engineering: \$26,500 for 12 months from Max Kade Foundation, Inc. for "Sensors for field crop production systems."

Jack M. Widholm, Donald G. White, and Alan L. Kriz, Agronomy: \$126,927 for 12 months from USDA for "Studies to reduce the aflatoxin problem in corn."

Laurie A. Rund, Matthew B. Wheeler, and Lawrence B. Schook, Animal Sciences: \$12,763 for 5 months from U.S. Public Health Service for "Characterization of insertional mutations."

Thomas J. Bicki, Agronomy, and **Jimmy L. Shonkwiler**, Extension: \$28,500 for 4 months from Illinois Department of Agriculture for "Statewide survey for agri-chemicals in rural private water wells in Illinois."

George Z. Gertner, Forestry: \$15,254 for 3 months from U.S. Army Construction Engineering Research Laboratory for "An analysis of artificial intelligence applications to the land condition-trend analysis program."

Gary L. Rolfe, Forestry: \$55,898 for 6 months from Illinois Department of Conservation for "Illinois Council on Forestry Development."

Mark B. David, Forestry: \$16,000 for 13 months from USDA for "Increasing soil temperature in a northern hardwood forest: effects on elemental dynamics and primary. . ."

Leslie Christianson, Ag Engineering: \$89,660 for 24 months from American Society of Heating, Refrigeration and Air Conditioning Engineers for "Low temperature air distribution: jets of low temperature air."

Lester V. Boone, Agronomy: \$25,247 for 38 months from Illinois Soybean Program Operating Board for "Evaluation of tillage systems on a statewide basis to maximize soybean productivity and sustainability."

Dean A. Glawe and Lynn E. Gray, Agronomy: \$212,231 for 36 months from Illinois Soybean Program Operating Board for "Characterization of pathogenic variability of fusarium solani isolates causing sudden death syndrome of soybean in Illinois."

Ellery L. Knake and Joseph D. Walsh, Agronomy: \$7,042 for 24 months from Illinois Soybean Program Operating Board for "Reducing cost of weed control for lo-till soybeans."

Poo Chow, Forestry: \$27,861 for 12 months from Association of American Railroads for "Fatigue life of wood."

Rex A. Liebl, Agronomy: \$92,330 for 36 months from Illinois Soybean Program Operating Board for "Strategies for reducing the development of herbicide resistant weeds in Illinois."

Cecil D. Nickell and Lila O. Vodkin, Agronomy: \$156,477 for 36 months from Illinois Soybean Program Operating Board for "Agronomic and molecular evaluation of an active transposable element in soybean."

John E. Sawyer and Stephen A. Ebelhar, Agronomy: \$12,190 for 12 months from Illinois Department of Agriculture for "Studies involving phosphorus, potassium and phosphorus interaction, and phosphorus and Ph interaction."

Jack M. Widholm, Agronomy: \$131,393 for 36 months from Illinois Soybean Program Operating Board for "Soybean improvement by gene transfer."

Lila O. Vodkin and Jack M. Widholm, Agronomy: \$29,750 for 6 months from Biotechnology Research and Development Corporation for "Expression of economically important proteins in soybean seed."

Lila O. Vodkin, Agronomy: \$83,885 for 24 months from Illinois Soybean Program Operating Board for "Tissue-specific promoters useful for disease resistance strategies."

Jan E. Novakofski, Animal Sciences, and William D. O'Brien, Electrical and Computer Engineering: \$132,478 for 24 months from USDA for "Beef carcass evaluation and identification: development of an ultrasound-based grading."

Rafael Jiménez-Flores, Food Science: \$130,000 for 24 months from National Dairy Promotion and Research Board for "Expression of genetically altered forms of casein and lactoferrin in yeast and mammary cells. . ."

Edward G. Perkins, Alvin I. Nelson, and Wilmot B. Wijeratne, Food Science: \$53,274 for 36 months from Illinois Soybean Program Operating Board for "Production of high quality edible soy oil from an extrusion/expeller process."

Gerald L. Riskowski, Ag Engineering: \$10,000 for 12 months from Illinois Pork Producers Association for "Corrosion of metal equipment and truss plates in swine buildings."

Harold D. Guither, Ag Economics: \$2,500 for 3 months from USDA for "The economic, social, and policy dimensions of animal rights and animal welfare: a comparison of Ireland and the United States."

Donald L. Day and Ruihong Zhang, Ag Engineering, and **Robert A. Easter**, Animal Sciences: \$15,000 for 12 months from National Pork Producers Council for "Predicting generation rates of air contaminants from swine manure."

Michael E. Irwin, Ag Entomology, and Scott A. Isard, Geography: \$10,000 for 12 months from USDA for "Alliance for aerobiology research workshop."

Frederick E. Below, Agronomy: \$44,633 for 13 months from Illinois Department of Agriculture for "Optimizing nitrogen management for corn production in Illinois."

Donald G. Bullock, Agronomy: \$38,765 for 13 months for "Evaluation of N fertilizer rate, planting date, tillage, and winter cover crops," and \$30,427 for 13 months for "Evaluation of the Minolta Spad 520 chlorophyll meter for on-farm management," both from Illinois Department of Agriculture.

Robert G. Hoeft and Emerson D. Nafziger, Agronomy: \$65,052 for 13 months from Illinois Department of Agriculture for "Evaluation of soil profile NO₃-N for prediction of N fertilizer requirements."

Poo Chow, Forestry: \$33,198 for 12 months from Association of American Railroads for "Durability of wood crossties."

Michael J. Mainz, Agronomy: \$32,582 for 13 months from Illinois Department of Agriculture for "The effects of four P&K rates on the drawdown and buildup of soil test."

Richard L. Mulvaney, Agronomy: \$27,062 for 13 months from Illinois Department of Agriculture for "Factors affecting the efficient use of nitrogen fertilizers in Illinois soils."

Lyle E. Paul, Agronomy: \$6,127 for 13 months from Illinois Department of Agriculture for "Nutrient placement and movement under zero-till conditions."

Theodore R. Peck, Agronomy: \$14,488 for 13 months for "Extraction of K from Illinois soils by electro ultra-filtration," \$21,432 for 13 months for "Twice monthly field soil sampling for soil testing to evaluate. . .," \$17,177 for 13 months for "Comparison of plow layered distributed and surface applied limestone," and \$22,604 for 13 months for "Spatial variability of soil pH, phosphorous, and potassium levels in two Illinois fields" all from Illinois Department of Agriculture.

Torbert R. Rocheford and John W. Dudley, Agronomy: \$94,164 for 18 months from USDA for "Specialty corn hybrids—identification of molecular markers associated with relevant chemical and physical kernel traits."

Joseph W. Stucki, Agronomy: \$36,013 for 13 months from Illinois Department of Agriculture for "Effects of iron oxidation state on the fate and behavior of potassium in soils."

Jack Odle, Animal Sciences: \$20,000 for 15 months from Illinois Pork Producers Association for "Quantitative evaluation of medium-chain triglyceride utilization by neonatal piglets."

Matthew B. Wheeler, Animal Sciences: \$10,000 for 12 months from Illinois Pork Producers Association for "Characterization of reproductive performance of purebred Meishan pigs and 1/2 Chinese gilts."

M. Susan Brewer, Foods and Nutrition: \$6,153 for 12 months from National Pork Producers Council for "Interactive effects of sodium lactate and sodium chloride on flavor, shelf life, and physical characterization of fresh pork."

Keith W. Singletary, Foods and Nutrition: \$54,192 for 12 months from American Institute for Cancer Research for "Inhibition of DMBA-induced mammary tumorigenesis by carnosol."

Sandra L. Brown and Louis R. Iverson, Forestry: \$93,408 for 12 months from USDA for "Land suitability and availability for carbon sequestration: tropical Asia as a case study."

Bevier Hall was air conditioned during the summer. Just as other buildings on campus, Bevier is heated with steam.

"The original Bevier design included ventilation ducts for laboratories," says

Douglas B. Bauling, Agricultural

Experiment Station planning engineer.

"Ducts weren't included for offices because they had windows, and air conditioning wasn't considered back then."

In the intervening years, offices were fitted with window air conditioning units, and the age of electronic equipment caught up with the building. "The electrical supply wasn't adequate to power all the air conditioners, computers, copy machines, and other equipment," Bauling says. "Now, the air conditioning system will reduce the demand on the electrical supply."

The project included 10 individual fan systems, and a couple of them weren't performing adequately because of inadequate ductwork in the building. "All new systems have to be de-bugged before they work the way you want them to," Bauling says of the efforts to get the systems to work as planned.

Soybean Lab

Phase I work on the National Soybean Research Laboratory will be completed following final inspections sometime during September, Bauling reports.

The first stage of construction included remodeling the 2nd floor and building an addition on the south side for mechanical systems. Phase I also included most of the demolition work on the first floor and basement. Researchers from the departments of agronomy and plant pathology will be moving into the second floor space later this year.

Phase II bidding was completed in August and will be presented to the UI Board of Trustees in October for approval. With approval, construction on the laboratories and faculty office space on the first floor and in the basement will start in November and should be finished within a year.

The balance of the project (Phase III) will include administrative offices, a seminar room, and an emergency power plant. Funding has not yet been provided.

Animal Sciences Laboratory

The new addition to the Animal Sciences Laboratory is essentially completed, and renovation work on the old section is moving along, Bauling says. Work is about one-third finished on the first three floors.

Bauling expects the building will be ready for occupancy by early summer, 1993. "Everyone should be moved in by the start of the fall semester," he says.

Bevier Hall and Turner Hall

Additional work on Bevier Hall and Turner Hall is in the program analysis phase. Plans for Bevier Hall include an elevator, a tunnel to PABL, and a new foods and nutritional instructional laboratory. In Turner Hall, plans call for moving the Department of Agronomy administrative offices to the first floor of the annex, remodeling space for horticulture and plant pathology, upgrading the mechanical systems (including fume hoods, acid waste, and heating/ventilation/air conditioning), and tending to deferred maintenance needs. ▼

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**University of
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College of
Agriculture**

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• • • • •
W.R. "Reg" Gomes

We've been involved in the past few months and years with change and how it's affecting us. Cooperative extension. . . campus programs. . . budgets. . . there are myriad issues that challenge us every day. But there's also consistency in our lives and institution. Our basic mission as a land-grant institution continues, even in the midst of change.

Look at our teaching academy. The first 15 members of this new program represent one of the greatest strengths of our college—teaching. Each semester, they and many other concerned faculty return to the classroom to be greeted by scores of eager young minds ready to learn. Of course there's change, too. The students are different each year.

And the course contents change over time as we learn more about our world and our disciplines and as we seek to help our students grasp this knowledge. But the regimen of teaching, the task of imparting knowledge, the satisfaction

On the cover: Gary J. Kling, associate professor of horticulture, makes a point at the first meeting of the Academy of Teaching Excellence. The Academy was founded last fall to further undergraduate teaching in the College of Agriculture.

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News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: AgriView, Office of the Dean, 101 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801.

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of knowing that we've helped another group of students move farther along their life-long path of learning never really change.

That teaching, that examination of new knowledge, continues in extension, too, even in the face of change. Our structure has changed in response to changing populations, changing economics, and changing demands on our institution. Our audiences have changed, too, since the Smith-Lever Act. We now have only two percent of our nation's population on farms, and 80 percent of our citizenry are more than 25 years removed from the farm. That means we need different perspectives to what we study and teach, but the people still need the information. And we have the information—in food safety, in nutrition, in environmental security, in food production, and in a host of other fields.

Now, as we try to anticipate the future, we're reminded of the changing expectations of our state government and campus administration. We're faced with the task of anticipating change and taking charge of our affairs. But while we're doing this, we must remember that the basic charter of our College of Agriculture continues. ▼

Recognizing the changing economic and administrative climate in the university and anticipating pressures for reorganization, the College of Agriculture has set on a course of self-examination and deliberation regarding its future structure.

A Strategic Marketing Coordination Committee (dubbed STRATCOM) was appointed by associate dean Don Holt last fall. Charged with examining strategic marketing questions as they apply to the college, the committee identified a number of issues important to the college. They included the following:

- factors affecting chronic downsizing of college programs;
- questions of whether individual programs belong in the college;
- questions regarding the mission of the college;
- concerns that a campus-level process could take place without college participation.

The committee decided that college structure is a priority issue, and they recommended a reorganization plan to the college faculty in November.

"The STRATCOM report is an independent faculty initiative," says **Sarahelen R. Thompson**, associate professor of marketing in the Department of Agricultural Economics and chair of the committee. "It was inaugurated when the heat of the campus problems was becoming intense. That's when the committee decided to change its focus from strategic marketing to reorganization."

"It's good for the college to deliver a pro-active plan to address challenges of the campus, the board of higher education, the college, the budget, and the experiment station," she adds. "We want to provide input; to have control over our future."

At the same time STRATCOM was meeting, the heads of the various departments and offices in the college were also addressing the issues the college is facing.

"The department heads are interested in and committed to thinking about appropriate changes," says **Gary L. Rolfe**, head of the Department of Forestry and also a member of the STRATCOM committee.

Rolfe cautions that the STRATCOM report and a subsequent report from the unit heads are not definitive. "There's a commitment to change, but we're still not sure what it will be," he says. "But if we don't come up with a new structure, it will be imposed on us from outside the college."

Thompson explains that STRATCOM considered the college and its traditional mission and then took a look at where the committee thinks the college should be in the future.

"The world is changing," Thompson says in explaining how the committee approached its subject. "It's changed since the college, the experiment station, and extension were founded. Farming then represented a livelihood and way of life for a large portion of the U.S. population. It's not the same any more."

The committee sees the mission of the college as emphasizing:

- quality of life;
- a comprehensive and integrated approach to teaching, research, and service ("Integrated is a strength of the college," Thompson says.);
- attention to a wider range of issues.

The STRATCOM proposal would alter the structure and somewhat change the mission of the college. It suggests reorganizing along broad lines and being adaptable to accommodate additional disciplines that might be moved from other campus units.

"The campus has some valid questions that must be answered," Rolfe says. "The college must develop an organization that alleviates problems it's always faced in relation to the rest of the campus."

"But the structure must fit agriculture — the entire industry — long term," he adds. "The faculty and the administrative leadership are committed to controlling our own destiny. Who better than us to develop a new structure."

Rolfe emphasizes that the entire question requires further discussion. And while he acknowledges that no decisions have been made, "Anyone who wants to keep the status quo is taking a position that is not appropriate and is not defensible." ▼

The STRATCOM Committee includes

Sarahelen R. Thompson, Agricultural Economics & chair

Donald R. Breaker, Agronomy

Michael Grossman, Animal Sciences

Edward G. Powers, Food Science

Kevin E. Suttley, Agricultural Entomology

David J. Wanner, Horticulture

Gary L. Rolfe, department heads liaison

David S. Montgomery, CES liaison

STRATCOM highlights

The STRATCOM proposal suggests that research and service components of the college's mission would be included in **interdisciplinary programs** that would cross department lines. Some specific recommendations include:

- Administration would include one dean and three associate deans for research, academic programs, and service.
- The research component would be comprise more than only the experiment station.
- The service component would encompass more than only the Cooperative Extension Service.
- Academic programs would include more than undergraduate education.
- International programs would cross departmental lines in all three areas. ▼

College establishes Academy of Teaching Excellence, plans 2-year curriculum revitalization program

The University of Illinois is widely recognized as a world-class educational institution with a rich heritage of teaching excellence that produced many of our country's most influential leaders. The College of Agriculture shares in this

reputation and is regarded as a campus leader in teaching and educational quality. ¶ "The College of Agriculture is proud to have some of the leading teachers and the most-innovative programs on the Urbana campus," says William L. George, associate dean and director of academic programs.

The College of Agriculture's leading role in teaching on the Urbana-Champaign campus is illustrated by the proportion of classes taught by tenure-track faculty. It's 81 percent in the College of Agriculture while the average on campus is 61 percent.

"Our commitment to educational excellence stems from the belief that teaching is a primary function of a land-grant university and that students are its highest priority."

This commitment led the college to establish the College of Agriculture Academy of Teaching Excellence, what George describes as "a new initiative aimed to really help all undergraduates by helping our faculty continue to enhance both their teaching and courses."

The academy is composed of a select group of faculty who are charged with maintaining and encouraging excellence in teaching and advising—our "board of directors."

The academy has the strong support of Dean W.R. "Reg" Gomes. "It's an honor group that will perform a think tank, leadership role to spread educational enrichment ideas throughout the college," Gomes explains. "It's designed to foster teaching excellence by providing a forum for our best educators to interact and provide leadership regarding teaching-related issues."

The academy's role will include:

- Planning seminars and symposia on teaching improvement;
- Conducting open forums on teaching;
- Recognizing teaching and advising excellence;
- Facilitating cross-disciplinary interactions and integration of knowledge within the curricula.

USDA grant strengthens efforts

Coincidental with the establishment of the academy, the college received a USDA Higher Education Challenge Grant in support of the college's curriculum

revitalization efforts. The \$64,000 grant for the 1992-93 and 1993-94 academic years was awarded to George, assistant dean Rebecca J. McBride, and assistant dean and director of placement Warren K. Wessels.

Their proposal, "Educating Students to Function in Their Future and to Adapt to Change," addresses curriculum design, course materials development, and faculty preparation and enhancement for teaching. Emphases are in general food, agriculture sciences, and home economics/human ecology.

The grant is supporting the salary of John G. Schmitz as curriculum coordinator in the college. Schmitz is completing Ph.D. studies in the Department of Educational Policy Studies, College of Education. His specialties include cultural literacy, thinking skill training, and multimedia instruction. His wide range of duties will include curriculum organization and planning, workshop facilitation, and educational materials development.

Early academy plans include a teaching development series, "Undergraduate Education for the 21st Century," for spring 1993. The academy will also provide select faculty with teaching enhancement grants which will allow instructors to improve their course programs and materials.

Private funds for long-term support

The Academy of Teaching Excellence is supported exclusively by private sources. George reports that endowments and bequests exceeding a half million dollars have already come in, and the college is working toward a fund of \$1 million to sustain the academy's programs.

"We want to garner other support as we're facing an environment of declining

They were (left to right) Lyle Fetting, Bruce Litchfield, Thomas Frey, Marvin Carbonneau, Donald White, Robert Skirvin, Gary Kling, Kent Mitchell, Douglas Parrett, and Warren Wessels.



1992-95

Lyle P. Fettig, professor, Department of Agricultural Economics
Gary J. Kling, associate professor, Department of Horticulture
J. Bruce Litchfield, associate professor, Department of Agricultural Engineering
Darrell A. Miller, professor, Department of Agronomy
Douglas F. Parrett, associate professor, Department of Animal Sciences

Marvin C. Carboneau, professor, Department of Horticulture
Sara U. Douglas, associate professor, Division of Consumer Sciences
Thomas L. Frey, professor, Department of Agricultural Economics
J. Kent Mitchell, professor, Department of Agricultural Engineering
Robert M. Skirvin, professor, Department of Horticulture

Robert A. Easter, professor, Department of Animal Sciences
Warren K. Wessels, assistant dean, Office of Academic Programs
Donald G. White, associate professor, Department of Plant Pathology
Shelly J. Schmidt, associate professor, Division of Foods and Nutrition
Robert G.F. Spitze, professor, Department of Agricultural Economics

Dean W.R. Gomes and William L. George inducted these charter members into the Academy of Teaching Excellence at a meeting of the college faculty on January 19, 1993. The induction ceremony was followed by a special presentation by Warren K. Wessels entitled "Where We've Been—Where We're Going." ▽

The Office of Resource Development has produced a fund-raising program to generate long-term financing for the entire concept of teaching enhancement. The Academy of Teaching Excellence Fund will support curriculum revitalization, course development, and course materials. It also will be used to enrich general education classes by providing innovative equipment and other instructional resources.

In addition to general funding to support the academy, the fundraising program includes opportunities for individuals to endow a variety of named academic positions, including:

- Named chairs in teaching;
- Named distinguished professorships;
- Named University Scholars;
- Named graduate fellowships;
- Named teaching enhancement funds;
- Faculty teaching excellence awards;
- Student teaching excellence awards.

Initial gifts to fund such endowments range from \$10,000 to \$3 million. ▼

National Soybean Research Laboratory takes shape

James B. Sinclair, professor in the Department of Plant Pathology, has been named interim director for the new

National Soybean Research Laboratory. Although the NSRL is gradually moving into the former Veterinary Medicine Building, the laboratory is more than merely a building.

The NSRL is also a program that's bringing together in one location much of the soybean-related research on the Urbana

campus. About all that will be missing by the time the building is finished are the biotechnology-based research programs in the Plant and Animal Biotechnology Laboratory.

The \$5 million research facility of approximately 40,000 net square feet of laboratories, pilot plants, and support space began taking shape about five years ago as the federal government began appropriating funds to develop a national center to mount and coordinate major research programs.

Research activities are expected to emphasize development of superior soybean varieties for specific commodity and niche markets worldwide as well as related work focusing on key aspects of soybean production, processing, marketing, and utilization.

As interim director Sinclair is responsible for managing the operation of the research programs in the NSRL. "My role is to get the program off the ground; to get it started," he explains. He will coordinate all interdisciplinary and interdepartmental activities involving the NSRL.

Sinclair's duties will include recruiting and developing two advisory committees. An internal advisory committee will represent soybean research programs on campus, and an external committee will comprise representatives of the soybean agribusiness community, including farmers and farmer commodity groups.

"My own research program has been interdisciplinary for many years," Sinclair says. "I've worked with ag engineers, ag economists, agronomists, food scientists, plant biologists, and biochemists. I'm looking forward to helping to define this role and the role of the laboratory."

Sinclair expects to begin by meeting with UI soybean scientists to become familiar with research being done in the university. The next step will be to learn more about

soybean research in other institutions. "The view is a national one."

"I see the office as eventually becoming a general clearinghouse of information between researchers and outside agencies," Sinclair says. "We want to provide a resource base of current scientific information for external and consulting personnel."

Sinclair expects the laboratory to eventually be the site for short courses and training seminars dealing with soybean production, utilization, and marketing. The building features an auditorium as well as conference and seminar rooms that will be available for classes and meetings.

His other work will include communications with funding agencies. "I hope to be able to assist researchers develop proposals for funding on state and national bases and inform potential funding agencies of work that's being done in the UI system," he says.

Sinclair will be assisted by **Gary Shaw**, recently appointed assistant to the director of the Illinois Agricultural Experiment Station. Shaw will serve as interim assistant to the director of the NSRL with responsibilities for day-to-day facility management. He will also administer the Technology Commercialization Building and the associated business incubator program.

Sinclair and Shaw have temporary offices in the NSRL, where they will administer the balance of the construction.

Construction began in the spring of 1991 when portions of the Agricultural and Environmental Sciences Building (formerly the Veterinary Medicine Building) were gutted. The phase I work, begun a year later, included remodeling the second floor and constructing an extension on the south side for mechanical equipment and stairs to serve all four levels. That has substantially been completed. ▼



Interim

Jim Sinclair (left) and Gary Shaw pause in the

director

new National Soybean Research Laboratory

and

that will be the new home for many of the

assistant

soybean researchers on the UI campus.

named

Chinese Germplasm Arrives

Within two weeks of their arrival in early May, samples from 500 varieties of Chinese soybean cultivars had been planted. The arrival of the germplasm marked the success of the negotiations between Chinese and American researchers and government officials.

Randall L. Nelson, director of the USDA soybean germplasm collection, says that researchers are eager to move ahead as quickly as possible to analyze and evaluate the varieties. Although genetic evaluation is a protracted process, investigators want the financial investors and Chinese donors to see results from the exchange. "It's to everyone's advantage to see what is of use [in these lines]," Nelson says.

Researchers are investigating insect and disease resistance and seed composition: traits with short-term economic impact. Long-term, researchers will evaluate the general genetic diversity, looking for patterns associated with certain traits.

First the soybeans will be put through the "pure line" process to make sure each cultivar is genetically pure. Researchers hope to link variations in certain genetic traits with specific regions in China. "We're hoping for lines that were genetically isolated for a long time," says Nelson. This may be important in the future if researchers need to know where to look for more plants with specific genetic traits.

One of the researchers working with this material is **Chen Yi Wu**, an agronomist from the Chinese Academy of Agricultural Sciences who has come to UIUC as part of the exchange. Chen is learning new genetic evaluation techniques as a visiting scholar in agronomy. Chen will return to China with his new research skills and some relevant analytical equipment.

Nelson is pleased with the response so far from researchers interested in working on this material. "These will be without a doubt the most thoroughly studied lines in our collection." ▽

UI and Purdue administrators hold retreat

Deans, department heads, and other members of the administrative teams from the UI and Purdue colleges of agriculture met in an administrative retreat at Robert Allerton Park on November 6 and 7 to discuss common concerns.

During two meals and in various sessions, in large groups and small, the participants compared notes and searched for answers to common concerns. Many continued their discussions informally the next day, which was the date of the Purdue-Illini game in Champaign.

"Relationships have existed between Purdue and Illinois for a long time," says Dean **W.R. "Reg" Gomes**. "We have faculty-faculty relationships and department-department relationships. We even share an aquaculture position housed at Purdue."

This history of informal and formal affiliations set the stage for the retreat.

"In a time when budgets are becoming tighter and our abilities are becoming more restricted, it's time to enhance our relationships with other institutions," Gomes says. "Purdue is our closest land-grant neighbor."

Purdue and Illinois have much in common. Both members of AGSAT, both participate in numerous regional research committees, and both participate in multi-state programs in extension and other areas.

"The deans had been talking for some time about formalizing relationships," Gomes explains. "And we decided that one of the first ways to encourage interaction is to have department heads and administrators talk about what's happening on our campuses and brainstorm ideas of what could be done in the future."

Gomes explains that there are advantages to interacting with an institution that approaches our size and in many ways is similar. The two campuses are only 100 miles apart and serve many of the same constituencies.

The retreat was an "intentional step to encourage and show support for cooperation between the schools; to commit to finding ways to remove whatever barriers may exist; to provide a setting for discussion," the dean says.

The deans hope the fall's retreat will be the first of several meetings, both formal and informal. They might not always, if ever again, include large administrative staffs. ▼

Why is SeaGrant on the Midwestern prairie?

By Robin Goettel

One of the first questions most people ask upon hearing about the Illinois-Indiana Sea Grant Program is, "What sea?"

and Nancy Riggs

Although Sea Grant may seem a misnomer for a program in the Midwest, there's a good reason for the name.

Sea Grant was developed in response to the degradation of marine resources and the inland waters of the Great Lakes.

The land-grant university system is familiar to most readers as the result of legislation enacted more than a century ago with the goal of improving cultivation of the land.

Although less well known, Sea Grant Colleges that make up the National Sea Grant College Program follow the same model. Created in 1966 by federal legislation and directed toward water resources, Sea Grant is a joint federal and state partnership committed to promoting the wise use of the oceans and the Great Lakes. Sea Grant represents a unique blend of research, technology transfer, education, and communications.

University-based researchers investigate coastal problems, and extension educators, specialists, and communications staff transfer research results to the legislators, educators, and the general public with an emphasis on local needs. A part of the national network of university programs, Illinois-Indiana Sea Grant was established in 1982 as a marine extension project and is the newest of the Sea Grant programs. One of six Great Lakes Sea Grant Programs, Illinois-Indiana Sea Grant addresses concerns about Lake Michigan and its impact

upon the economy and the quality of life for residents of the Great Lakes Basin.

Illinois-Indiana Sea Grant is jointly administered by UIUC and Purdue University in West Lafayette, Indiana. The bi-state arrangement provides resource availability. Both universities are land-grant institutions, and the Cooperative Extension Service is an established, integral part of each university, providing a program implementation route.

Robert Espeseth, program coordinator, holds a joint UI appointment with both the Cooperative Extension Service and the Department of Leisure Studies. "Lake Michigan is a major resource for Illinois and Indiana providing water supply, sportfishing and a variety of recreational facilities, and is the focus of the program," Espeseth says. "The program's contribution is in a variety of areas including increasing recreation and tourism as well as assisting a growing aquaculture industry."

Co-coordinator **Joseph O'Leary** administers the marine extension program from Purdue's Department of Forestry and Natural Resources. **Glenn Stout**, research coordinator, has ties with water-related research through his position as director of the UI Water Resources Center. Sea Grant helps communities determine needs and provides educational opportunities related to such concerns as the promotion of travel and tourism, waterfront development, toxic contaminants, and aquaculture development.

Currently two field staff interact with communities in the direct transfer of

knowledge on marine issues. **Chris Pennisi**, extension educator, addresses concerns of boaters, anglers, and coastal industry managers in the Chicago area. **LaDon Swann**, Sea Grant aquaculture extension specialist, helps to establish and maintain fish farming operations. Swann holds joint appointments at Purdue and in the UI Department of Animal Sciences.

The Sea Grant communications office is a part of the UI Office of Agricultural Communications and Education. Communications specialists **Robin Goettel** and **Nancy Riggs** develop and manage communications strategies to disseminate information resulting from Sea Grant research activities. In addition, the communications staff edits research reports, disseminates scientific journal reprints, and assists in the development and distribution of educational publications.

Research and extension projects focus on marine-related needs. One of Sea Grant's roles has been to provide information on essential economic diversification. For example, industries strongly dependent on Lake Michigan in the past, such as steel manufacturing, have become smaller. Marinas, charterboat operations, bed and breakfast inns, and tourism projects provide recreational opportunities and generate income.

Sea Grant is a major contributor to the regional growth of aquaculture, which provides economic benefits in the production, marketing, and sales of fish food products.



LaDonn Swann (center) discusses striped bass stocking rates at an aquaculture workshop. With Swann are extension aquaculture specialists Brian Nerrie (left) from Virginia State University and Paul Brown (right) from Purdue University.

Adverse economic impact is a threat from the spread of zebra mussels, tiny mollusks that were first introduced into U.S. waters in 1986. Zebra mussels have spread into the Great Lakes and streams and rivers in the Midwest where they can clog water intake lines resulting in costly removal. Research is focused on control, and awareness programs target the prevention of further spread.

Education, a major Sea Grant component, is provided through projects and workshops to meet community and commercial needs. The education of future researchers and scientists is supported through university-based courses, and educational resources are developed for use in elementary classrooms, 4-H, and other community settings.

Illinois-Indiana Sea Grant has grown tremendously, expanding from the initial marine extension project to its current status. The highest designation of Sea Grant College, awarded to programs that reach a maturity that can support a full range of Sea Grant activities, is expected to be achieved within the next year. ▼

Highlighting a Decade of Sea Grant Activities

Aquaculture

Workshops, publications, and videotapes provide assistance in developing and sustaining aquaculture operations. Examples include the publications *A Basic Overview of Aquaculture*, "Making Wise Choices When Direct Marketing Your Aquaculture Products," and a video entitled "Something Fishy."

Sportfishing

Information provided to charterboat operators enhances Lake Michigan sportfishing.

Education

Wetlands are Wonderlands, youth marine education series, used in elementary classrooms, 4-H, and other community settings throughout the country, defines wetlands and addresses appropriate conservation. *Developing a Bed and Breakfast Business Plan* outlines legal and management procedures. *Gulliver*, the talking gull, an interactive display, features an animated gull who discusses marine issues in many venues, including the Illinois State Fair and the College of Agriculture Open House. *Envirovet*, a veterinary medicine course, provides insight into water quality.

Travel and Tourism

Assistance provided to the tourism industry includes development of "Things to See and Do in Illinois" slide program, promotion of Lake Michigan Circle Tour, and other educational and awareness programs.

Zebra Mussels

Research focuses on control methods. Educational publications target the prevention of further spread.

Seafood Safety

An initiative is being launched to provide workshops and publications addressing ways to reduce risks when handling and preparing fish.

Water Quality

Sea Grant is cooperating with other Great Lakes agencies to provide education regarding contaminant reduction in Lake Michigan.

Richard E. Warner has assumed leadership of the agro-ecology program in the College of Agriculture.



"The environment is a stress point for agriculture," Warner says. "We want the agro-ecology program to help agriculture address these issues and make good decisions that will benefit farmers and society for the long run."

Communications

Warner sees the agro-ecology program serving two primary functions. First, as a communications medium, serving as an information clearinghouse. Second, to provide leadership to college programs.

As a communications medium, the agro-ecology program will play a lead role in developing and sponsoring faculty meetings, seminars, and conferences that will encourage discussion and interdisciplinary cooperation. In addition, two agro-ecology publications, *Agro-ecology Technical Notes* and *Agro-ecology News & Perspectives* will serve as media for communicating with the program's various publics.

Agro-ecology Technical Notes will focus on on-farm research and be produced under the direction of Dan Anderson. *Agro-ecology News & Perspectives* will resume as a forum for views and opinions as well as present news about the field. The two publications will be published quarterly starting in March. Distribution initially will be to a mailing list of about 5,000 names.

Agro-ecology program gets new leadership

The agro-ecology program in the College of Agriculture has moved into a new phase with the appointment of Richard E. Warner as interim assistant director for natural resources in the Illinois Agricultural Experiment Station. The director of the Center for Wildlife Ecology in the State Natural History Survey, Warner has been affiliated with the Department of Animal Sciences since 1984 and has been on the agro-ecology ad hoc committee since its inception.

Along with the publications, Warner anticipates the agro-ecology program will lead in developing electronically distributed information as well.

Leadership

Some of the leadership roles Warner outlines for the agro-ecology program include:

- Synthesizing where we're at now;
- Working on undergraduate and graduate curricula to integrate an agro-ecology perspective into courses;
- Presenting success stories on integrated team research;
- Enhancing appropriate information delivery systems;
- Investigating opportunities for interdisciplinary research featuring integrated systems and a team approach.

"I'm looking toward developing working committees," Warner says.

Broadening the scope

"We've made progress in practicing on-farm research," Warner says of the agro-ecology program. "But there are other facets of the program that need to be addressed. We need to provide a broad and integrated overview of agro-ecology. It's more than just sustainable agriculture."

"One thing that makes the UI program distinctive is that we want to take

approaches that allow the faculty to work together and make relevant contributions," Warner emphasizes. "We want to be inclusive rather than establish boundaries. We want to show and encourage our faculty how their areas fit together."

Warner earned his B.S. at Iowa State in fish and wildlife ecology. His M.S. in animal ecology and his Ph.D. in interdisciplinary studies in natural resources and ecology are both from UI. He has worked extensively with farmers, farm leaders, natural resource agencies, and communities and has experience in research and on-farm programs.

Warner's goal is the "maturation of the agro-ecology program," which he itemizes as:

1. *Stability of focus.* The people of Illinois, our students, and others know the college has this focus for the long term. We must sustain effort to bring in active participants at every level—faculty, farmers, agriculture industry, and private citizens.
2. *Clarity of focus.* We must determine what our priorities should be and develop consensus within the college.
3. *Growth of focus.* We must develop relationships with people who have needs and interests in agro-ecology. We need to serve the citizens of Illinois. ▼

Lowell D. Hill, L.J. Norton Professor of Agricultural Marketing in the Department of Agricultural Economics, was one of 23 UI faculty recognized as 1992 University Scholars. In its first eight years, the University Scholars program has honored 204 faculty from both the Urbana-Champaign and Chicago campuses with this prestigious award.

For 1992, 16 young scholars were each awarded \$6,000 per year for three years to support their scholarly activities. In addition, seven annual awards of \$12,000 each for three years were made to senior faculty members for work "superior in their fields."

Awards are typically used to buy books, journals, and equipment; to arrange conferences on campus and defray expenses of nationally regarded guest speakers; to conduct research around the globe; and to hire graduate students to conduct research and meet critical grant deadlines.

Hill is nationally and internationally recognized for his innovative research strategy. His work on economic equity in measuring grain quality, on transportation regulations, and on market efficiency has been influential in changing state and national policies and regulations to increase marketing efficiency.

Hill's research in moisture-meter calibration and in discount strategies used by elevators has resulted in changes in state regulations, saving farmers millions of dollars. And his nationwide study of grain movements—the most comprehensive ever conducted—increased the efficiency of grain marketing.

An Iowa native, Hill earned his B.S. degree at Iowa State University and his M.S. and Ph.D. degrees from Michigan State University. He joined the UI faculty in 1963.

Instituted in the fall of 1965, the University Scholars Program is intended to help build faculty

stability by encouraging top-ranked faculty to continue and expand their careers at the UI. The program identifies talented faculty from many different disciplines and promotes continued professional growth and contribution to the UI and the publics it serves.

Faculty do not apply for the award but are nominated to participate in the program. Final selection is made by a committee of senior faculty.

The University Scholars Program is supported by the UI Foundation Advancement Fund, a pool of unrestricted monies independent of any specific campus unit or programs. The funds are distributed through joint approval of the UI Foundation board of directors and the university president.

The Advancement Fund has been used to meet dozens of urgent needs and to fill critical gaps in funding for campus programs. The University Scholars Program is the top priority among the Advancement Fund's long-term goals. ▼

Past University Scholars from the College of Agriculture

1991	William L. Ogren USDA/Department of Agronomy
1990	Lawrence B. Schook Department of Animal Sciences
1989	Hans P. Blaschek Department of Food Science
1989	John B. Braden Department of Agricultural Economics
1988	Donald P. Briskin Department of Agronomy
1988	Willard J. Visek Department of Food Science
1987	Malcolm C. Shurtleff Department of Plant Pathology
1986	David H. Baker Department of Animal Sciences
1986	George C. Fahey Department of Animal Sciences

Janice M. Bahr, Department of Animal Sciences, is president-elect of the Society for the Study of Reproduction.

Marvin P. Bryant, Department of Animal Sciences, received the Alumni Achievement Award from Washington State University for "outstanding achievements in the field of microbiology and for exemplary leadership in advising and training students.

Loren E. Bode, Department of Agricultural Engineering, was elected a Fellow of the American Society of Agricultural Engineers. ASAE Fellows are chosen for their unusual professional distinction and extraordinary qualifications. He was also elected a trustee of the ASAE Foundation board of trustees.

The UI Board of Trustees approved 16 promotions in rank in the College of Agriculture effective August 21. Promoted to professor were Agricultural Entomology: **Kevin L. Steffey**; Agronomy: **Donald P. Briskin**; Animal Sciences: **Harold W. Gonyou**, **Carl M. Parsons**, **Roger D. Shanks**; Forestry: **George Z. Gertner**; Human Resources and Family Studies: **Andrea H. Beller**; Plant Pathology: **Dean A. Glawe**, **Gregory R. Noel**. Promoted to associate professor were Agricultural Economics: **Gerald C. Nelson**; Agricultural Engineering: **Robert A. Aherin**, **J. Bruce Litchfield**, **John F. Reid**, **Gerald L. Riskowski**; Horticulture: **John B. Masiunas**; Human Resources and Family Studies: **Keith W. Singletary**.

James M. Krejci, extension educator in natural resource management at the Edwardsville Extension Center, was awarded one of 15 Norman A. and Ruth A. Berg Fellowship by the Soil and Water Conservation Society and participated in the SWCS annual meeting in Baltimore, Maryland. The Berg fellowship was established this year to honor early and mid-career conservationists and scientists in the U.S. and Canada.

Fifteen individuals were recognized with Awards of Excellence by the Illinois Cooperative Extension Service at the annual conference on October 20 in Champaign.

Awards for sustained excellence were presented to **Lester V. Boone**, extension specialist, soil fertility; **Harold D. Guither**, extension specialist, public policy; **Dean Oswald**, extension adviser, agriculture, Henry County.

Individual awards for outstanding or innovative program were given to **Charlotte Crawford**, extension educator, consumer and family economics, for her "Smart Moves in Business Recycling" program; **Brenda Cude**, extension specialist, consumer economics, for a series of surveys about consumer understanding of environmental terms; **Michael E. Gray**, extension specialist, field crops IPM, for participatory on-farm research programs; **Kevin Kline**, extension specialist, horses, for his program "Sustainability and Integrity of Horse Racing in Illinois"; **Linda Stovall**, extension educator, CHEP, for a program making child care more available in East St. Louis.

Two team awards were presented for outstanding or innovative programs. One was for **Jerry Robinson, Jr.**, program leader, and **Ann H. Silvis**, communications manager, Rural Partners/Kellogg Foundation Program, and **John van Es**, program leader, community resource development, for the "Rural Partners/Kellogg Foundation Program." The other was to **Ann Rund**, extension specialist, 4-H/youth, and extension educators **Mary Jo Stewart**, EFNEP, **Barbara Farner**, nutrition and wellness, and **David Shiley**, natural resource management, for a program "4-H Global Connections."

Sara U. Douglas, Division of Consumer Sciences, was one of eight UI faculty members who were awarded Fulbright grants for 1992-93. She lectured and conducted research at Airlangga University in Surabaya, Indonesia from August through February.



The Illinois program Helping Rural Communities Prepare for Economic Development received the award for the most Innovative Program in North America from the Community Development Society at its international meeting in Charleston, South Carolina on July 29, 1992. Accepting the award were (left to right) Dean Kellams, community development specialist, John van Es, community development specialist, Phillip Phillips, director of the Illinois Laboratory for Community and Economic Development, S.M. Somaratne, research assistant, Anne Silvis, program manager, Don Naylor, field representative, and Jerry Robinson Jr., program leader, all from the UI, and Douglas Dougherty of Soyland Power, chairman of the Statewide Program Advisory Committee.

H. Rex Gaskins, assistant professor, growth and development, in the Department of Animal Sciences and Division of Nutritional Sciences, was selected by the International Life Sciences Institute-Nutrition Foundation as one of four recipients of a 1993-1994 Future Leaders Award. Future leaders are chosen primarily on their promise as a leader in the field of nutrition. The award provides \$15,000 per year for two years to conduct exploratory research.

Gerald C. Nelson and **Wesley D. Seitz** of the Department of Agricultural Economics were among the winners of top honors in the 1992 EDUCOM Higher Education Software Awards competition sponsored by EDUCOM, a consortium of 600 higher-education institutions and 110 corporations, and by the University of Maryland at College Park.

Nelson and Seitz were recognized in the category Distinguished Social-Sciences Software (Economics) for "AECON-Intro: Computer-Aided Instruction for Introductory Economics" for Apple Macintosh. The award included a cash prize of \$1,000.

Shelly J. Schmidt, Division of Foods and Nutrition, was recognized by two professional societies as an outstanding researcher in the fields of foods, nutrition, and technology. She received the 1992 Samuel Cate Prescott Award from the Institute of Food Technologists and the Young Scientist Award from the Division of Agriculture and Food Chemistry of the American Chemical Society.

Stephen C. Schmidt, Department of Agricultural Economics, received a Fulbright grant to lecture at the University of Plovdiv in Bulgaria from January to July.

Steven T. Sonka, Department of Agricultural Economics, received the National Association of Colleges and Teachers of Agriculture VNR/AVI award for excellence in research and teaching. He also was selected as NACTA Teaching Fellow.

Tom R. Carr, Department of Animal Sciences, was elected president of the American Meat Science Association for 1992-93.

Research programs in the College of Agriculture are enhanced considerably by gifts and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the college, including the following:

Robert A. Aherin, Agricultural Engineering, and **Jimmy L. Shonkwiler**, Extension: \$319,993 for 36 months from W.K. Kellogg Foundation for "The Illinois agricultural safety and health coalition network building program."

Robert A. Aherin, Agricultural Engineering: \$18,029 for 12 months for "Migrant farm worker and migrant farm employer pesticide risk assessment" and \$13,915 for 12 months for "Private pesticide applicator safe work behavior risk analysis," both from Illinois Department of Agriculture.

Janice M. Bahr, Animal Sciences: \$75,000 for 12 months from National Science Foundation for "Regulation of ovulation in the domestic hen."

Ion C. Baianu and **Lun-Shin Wei**, Food Science: \$71,000 for 24 months from American Soybean Association for "Expansion of soybean utilization in the plastics, pharmaceutical and packaging industries."

Frantzie Balmir and **Susan M. Potter**, Foods & Nutrition: \$16,045 for 60 months from US Public Health Service for "Influences of dietary protein source and total fat intake on plasma lipids apolipo-proteins and hormones."

Wayne L. Banwart and **John J. Hassett**, Agronomy: \$80,000 for 24 months from USDA for "Ped coating influence on pesticide transport."

Leann L. Birch, Human Development and Family Studies: \$89,749 for 12 months from US Public Health Service for "Associative conditioning of children's food preferences."

Peter D. Bloome, Extension, and **Loren E. Bode**, Agricultural Engineering: \$209,000 for 12 months from Illinois Department of Agriculture for 1992-93 pesticide applicator training.

Charles W. Boast, Agronomy, **J. Kent Mitchell**, Agricultural Engineering, and **Susan M. Larson**, Civil Engineering: \$245,000 for 36 months from USDA for "Water flow and herbicide transport into and within wormholes."

Loren E. Bode and **Robert E. Wolf**, Agricultural Engineering: \$1,980 for 12 months from Illinois Department of Agriculture for "Worker exposure from handling granular insecticides."

Harry Bottenberg, Agricultural Entomology: \$20,780 for 39 months from National Science Foundation for "Impact of temperature on the epidemiology of soybean dwarf virus in Japan."

John B. Braden, Agricultural Economics: \$6,285 for 42 months from U of Wisconsin/International Agriculture Program for "Resource pricing and management practices."

John B. Braden and **David L. Chicoine**, Agricultural Economics: \$32,706 for 12 months from U.S. Geological Survey for "Aggregation, declining block prices, and urban water demand in humid areas."

Sandra L. Brown and **Louis R. Iverson**, Forestry: \$102,421 for 12 months from U.S. Department of Energy for "Spatial and temporal patterns of biotic exchanges of CO₂ between the atmosphere and tropical landscapes."

Munir Cheryan and **Sarad K. Parekh**, Food Science: \$101,935 for 24 months from USDA for "CMA from corn: scale up of the fermentation and recovery processes."

Munir Cheryan, Food Science: \$14,000 for 24 months from Ceramem Corp. for "Nonfouling ceramic membranes for treatment of fuel ethanol stillage"; \$172,474 for 24 months from Ill. Corn Marketing Board for "CMA from corn: scale up and economic feasibility."

David L. Chicoine, Agricultural Economics: \$7,560 for 12 months from Illinois Department of Revenue for "1994 farmland assessment data."

Leslie L. Christianson, Agricultural Engineering: \$91,317 for 12 months from US EPA for "Indoor air quality."

Leslie L. Christianson, **Gerald L. Riskowski**, and **Donald L. Day**, Agricultural Engineering: \$93,402 for 18 months from American Society of Heating, Refrigeration and Air Conditioning Engineers for "Influence of space air movement on exhaust hood performance."

Michael A. Cole, Agronomy: \$77,604 for 24 months from Illinois Department of Energy and Natural Resources for "Identifying site specific limitations to successful in situ bio-remediation of agrichemical retail sites."

Brenda J. Cude and **Marjorie A. Sohn**, Consumer Sciences, and **M. Susan Brewer**, Foods and Nutrition: \$25,000 for 24 months from US EPA for "Consumer waste reduction strategies: an educational program response."

Mark B. David, Forestry: \$17,615 for 12 months from USDA for "Increasing soil temperature in a northern hardwood forest: effects on elemental dynamics and primary productivity."

Mark B. David, Forestry: \$27,440 for 12 months from US EPA for "Field study of sulfur and carbon processes which regulate surface water acidity."

Sharon M. Donovan, Foods and Nutrition, and **Jack Odle**, Animal Sciences: \$86,924 for 48 months from U.S. Public Health Service for "Insulin-like growth factors in neonatal intestinal development."

Sharon M. Donovan, Foods and Nutrition: \$30,000 for 24 months from International Life Science Institute and Foundation for "Hormonal therapy during recovery from neonatal malnutrition: effects on growth, body. . ."

James K. Drackley, Animal Sciences: \$109,620 for 29 months from E.I. DuPont for "High oil corn for dairy cows."

John W. Dudley, Agronomy: \$114,606 for 17 months from Garst Seed Co. for "Application of restriction fragment length polymorphism technology."

Robert E. Dunker, Agronomy: \$10,000 for 5 months from U.S. Bureau of Mines for "1992 national symposium on prime farmland reclamation."

Larson B. Dunn, Food Science: \$26,000 for 29 months from Illinois Soybean Program Operating Board for "Utilization of soybean meal/soy molasses in polyurethane foams."

Larson B. Dunn, Food Science: \$37,102 for 24 months from American Soybean Association for "Utilization of soybean meal/soy molasses in polymers: wood adhesives and polyurethane foams."

Robert A. Easter, **Howard Cook**, and **Bill A Fisher**, Animal Sciences: \$29,900 for 15 months from Eli Lilly & Co. for "The clinical effectiveness of various levels of ractopomine on the growth performance of finishing swine."

Robert A. Easter, Animal Sciences: \$5,200 for 11 months from Central Soya for "Evaluation of new ingredients for swine starter feeds from weaning to 40 lbs. body weight."

Robert A. Easter, Animal Sciences: \$13,049 for 7 months from E.I. DuPont for "Establishment of the digestible and metabolizable energy values for various corn types."

Steven R. Eckhoff and **Kent D. Rausch**, Agricultural Engineering: \$15,000 for 12 months from Anderson Research Fund/OSU for "Development of methods for detection of corn damaged by high-temperature drying."

Steven R. Eckhoff, Agricultural Engineering: \$22,309 for 12 months from E.I. DuPont for "Technical testing of corn samples."

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Steven R. Eckhoff, Agricultural Engineering: \$77,550 for 24 months from Illinois Corn Marketing Board for "A process to enhance the compatibility of ethanol and fructose production."

Timothy R. Ellsworth, Agronomy, and **Albert J. Valocchi**, Civil Engineering: \$150,000 for 24 months from USDA for "Spatial and temporal scale dependence of transport processes in the vadose zone."

John W. Erdman, Food Science: \$7,650 for 12 months from Procter & Gamble Co. for "B carotene bioavailability from beverages in ferrets."

Robert D. Espeseth and **Peter D. Bloome**, Extension: \$85,844 for 24 months from National Oceanic and Atmospheric Administration for "Zebra mussel research."

Robert D. Espeseth and **Benjamin A. Jones**, College of Agriculture: \$189,332 for 18 months from USDA for "Intensive commercial aquaculture research and demonstration project."

Robert D. Espeseth and **Glenn E. Stout**, Extension: \$51,444 for 16 months from National Oceanic and Atmospheric Administration for "Great Lakes water quality and public participation education program: Illinois-Indiana Sea Grant element."

Robert D. Espeseth and **Peter D. Bloome**, Cooperative Extension: \$10,000 for 11 months from National Oceanic and Atmospheric Administration for "Illinois Indiana Sea Grant program."

Stephen K. Farrand, Plant Pathology: \$220,000 for 36 months from USDA for "Assessing horizontal gene transfer from rhizosphere micro-organism to a gem."

Vicki R. Fitzsimmons, Consumer Sciences: \$5,500 for 2 months from Ralston Purina for "Consumers use of money saving strategies in the purchase of pet food and snacks during an economic recession."

Karen R. Gehrt, Extension: \$17,500 for 8 months from Chanute Air Force Base for "EFNEP at Chanute AFB."

William L. George, **Rebecca J. McBride**, and **Warren K. Wessels**, Administration: \$64,000 for 24 months from USDA for "Educating students to function in their future and to adapt to change."

George Z. Gertner, Forestry: \$75,843 for 12 months from U.S. Army Construction Engineering Research Laboratory to provide technical and logistical management and coordination in support of the land condition trend analysis program.

Richard E. Giles, Animal Sciences: \$86,189 for 12 months from USDA for "Swine gene mapping."

Robin G. Goettel, Extension: \$19,890 for 3 months from National Oceanic and Atmospheric Administration for a conference culminating the Green Bay mass balance effort.

Brenda R. Harbaugh and **James D. Oliver**, Extension: \$47,079 for 8 months from DuPage County for "Solid waste — multifamily outreach."

David E. Harry, Forestry: \$58,255 for 24 months from USDA for "Physiology and genetics of alcohol dehydrogenase in populus."

Robert J. Hauser, Agricultural Economics: \$59,997 for 27 months from Illinois Highway Research Council for "Rural roads & bridges—development of information."

Robert J. Hauser, **Hayri Onal** and **Richard L. Farnsworth**, Agricultural Economics: \$97,881 for 24 months from Illinois Corn Marketing Board for "An assessment of the economic and environmental aspects of the corn industry: a focus on Illinois and the future."

Dawn L. Hentges, Foods and Nutrition: \$44,936 for 14 months from National Oceanic and Atmospheric Administration for "Sanitation and quality assurance training program for retail seafood handlers."

Lowell D. Hill, Agricultural Economics: \$15,000 for 12 months from Ohio State University/OARDC for "Price and quality competition in international soybean markets."

Robert H. Hornbaker, **Harold D. Guither**, and **David C. White**, Agricultural Economics: \$36,900 for 12 months from Tennessee Valley Authority for "Fertilizer tests and demonstrations."

Theodore Hymowitz and **Ram J. Singh**, Agronomy: \$116,000 for 24 months from USDA for "Genomic affinities in the genus glycine willd."

Scott A. Isard and **Michael E. Irwin**, Agricultural Entomology: \$100,000 for 24 months from USDA for "The ascent phase of aphid migration and dispersal."

T.J. Jacob, Forestry: \$25,000 for 12 months from Illinois Department of Conservation for "Networking project learning tree."

Jean R. James, Human Development and Family Studies: \$174,608 for 12 months from Illinois Department of Children and Family Services for "Child care resource service."

Rafael Jiménez-Flores, Food Science: \$15,000 for 12 months from U of Vermont for "Modification of milk composition using retroviral vectors."

Keith W. Kelley, Animal Sciences: \$250,000 for 36 months from USDA for "Endocrine regulation of the immune system."

Keith W. Kelley, Animal Sciences: \$237,567 for 12 months from US Public Health Service for "Hormonal restoration of a functional thymus during aging."

Barbara P. Klein, **Shelly J. Schmidt**, and **Shelly J. Richardson**, Foods and Nutrition: \$5,376 for 6 months from General Foods for "Perceived saltiness and sodium content."

S. Safi Korban, Horticulture: \$14,963 for 3 months from Biotechnology Research and Development Corporation for "Genetic manipulations in perennial plant species."

Reed W. Larson, Human Development and Family Studies: \$109,290 for 12 months from U.S. Public Health Service for "Stress, coping, and emotional well being in adolescence."

Donald K. Layman, Foods and Nutrition: \$116,208 for 12 months from Quaker Oats Co. for "Physical and cognitive performance after consumption of cereal grains."

Donald K. Layman, **Jan E. Novakofski**, and **Sharon M. Donovan**, Foods & Nutrition: \$100,000 for 24 months from US Public Health Service for "Recovery from growth retardation: anabolic responses."

Harris A. Lewin, Animal Sciences: \$102,932 for 12 months from USDA for "Towards a 20 cm map of the bovine genome."

Harris A. Lewin, Animal Sciences: \$108,000 for 36 months from USDA for "Detection and mapping of genes affecting traits of economic importance in dairy cattle."

Harris A. Lewin and **Lawrence B. Schook**, Animal Sciences: \$100,000 for 24 months from USDA for "Host mechanisms of resistance and susceptibility to bovine leukemivirus infection."

David A. Lins, Agricultural Economics: \$40,000 for 12 months from Illinois Farm Development Authority for "Illinois farm and agri-industry finance research program."

J. Bruce Litchfield, Agricultural Engineering: \$15,000 for 12 months from Anderson Research Fund/OSU for "Drying induced quality degradation in maize: development of advanced grain dryers."

Scott E. Martin, Food Science: \$85,000 for 24 months from USDA for "Listeria monocytogenes virulence."

John B. Masiunas, Horticulture: \$36,354 for 12 months from USDA for "Sustainable production systems for vegetables."

Brent A. McBride, Human Development and Family Studies: \$7,500 for 12 months from Spencer Foundation for "Parental involvement in prekindergarten at-risk programs: how do the players perceive the game?"

Mary K. Munson, Extension: \$19,404 for 10 months from State of Illinois for "Serve Illinois Youth in Action."

Emerson D. Nafziger, Agronomy: \$8,500 for 24 months from USDA for "Improving the ecology of corn production and testing perennial alternatives to silage corn."

Toshiro Nishida and **Hiro I. Nishida**, Food Science: \$188,929 for 60 months from U.S. Public Health Service for "Role of plasma lipoproteins in atherosclerosis."

Jack Odle, Animal Sciences: \$167,001 for 24 months from USDA for "Regulation of hepatic ketogenesis in low birth weight piglets."

James D. Oliver and **Ronald C. Wolford**, Extension: \$11,316 for 8 months from Chicago Community Trust for "Urbs in horto tree fund minigrants."

Jerald K. Pataky, Plant Pathology: \$14,000 for 12 months from a trade association for "Improving disease resistance in sweet corn."

Earl B. Patterson, Agronomy: \$8,000 for 57 months from USDA for "Maize genetics stocks evaluation and computerization."

Edward G. Perkins, Food Science: \$22,800 for 12 months from US FDA for "Formation of isomers and off flavors during oil processing."

Edward G. Perkins and **Alvin I. Nelson**, Food Science: \$45,176 for 25 months from American Soybean Association for "Studies on production of soybean oil and meal: effects of oil extraction, moisture content, and variety."

William H. Peterson, Agricultural Engineering, and **Peter D. Bloome** and **Jimmy L. Shonkwiler**, Extension: \$77,706 for 12 months from Ill. Dept. of Energy and Natural Resources for "Agricultural Energy Information and Education Project."

David R. Pike, Agronomy: \$24,000 for 12 months from USDA for "Determination of the suitability of alternative pesticides using paired treatment comparisons."

Susan M. Potter and **Mary R. Larson**, Foods and Nutrition: \$12,000 for 12 months from American Heart Association for "Effects of dietary proteins on the development of lipid."

Susan M. Potter, Foods and Nutrition, and **John W. Erdman**, Food Science: \$75,718 for 25 months from American Soybean Association for "Plasma lipid lowering effect of soy protein and soy fiber in free-living hypercholesterolemic men."

Anton D. Pugel, Forestry: \$4,025 for 2 months from Ill. Dept. of Conservation for "Development and refinement of a secondary wood products directory."

Gerald L. Riskowski and **Leslie L. Christianson**, Agricultural Engineering, and **Harold W. Gonyou**, Animal Sciences: \$103,482 for 18 months from American Society of Heating, Refrigeration, and Air Conditioning Engineers for "Development of ventilation rates and design information for laboratory animal facilities."

Jerry W. Robinson, Agricultural Economics: \$75,000 for 12 months from Illinois Board of Higher Education for "Helping rural communities prepare for economic development."

Jerry W. Robinson, Agricultural Economics, and Phillip D. Phillips, Corporate Relations & Community Development: \$15,500 for 3 months from Illinois Department of Commerce and Community Affairs for "Developing a

framework for collaboration in rural community development".

Jerry W. Robinson, Agricultural Economics: \$50,000 for 36 months from Kellogg Foundation for "Helping rural communities prepare for economic development."

Torbert R. Rocheford, Agronomy: \$20,000 for 12 months from Northrop King Company/Sandoz for "Specialty corn hybrids - identification of molecular markers associated with relevant chemical. . ."

Torbert R. Rocheford, Agronomy: \$114,555 for 24 months from USDA for "Specialty corn hybrids - RFLP & RAPD marker mapping of genes controlling relevant chemical and. . ."

Torbert R. Rocheford and **Donald G. White**, Agronomy: \$72,458 for 12 months from USDA for "Identification of molecular markets associated with genes for preharvest resistance in corn to aspergillus flavus."

Gary L. Rolfe, Forestry: \$5,500 for 12 months from Illinois Department of Conservation for "Volunteer database update."

Gary L. Rolfe, **Mark B. David**, and **George Z. Gertner**, Forestry: \$79,869 for 18 months from US Army Construction Engineering Research Laboratory for "Applications of land condition trend analysis data to support development of a carrying capacity model on US Army training. . ."

Lauretta A. Rund, Animal Sciences: \$29,900 for 12 months from U.S. Public Health Service for "Characterization of insertional mutations."

Martin M. Sachs, Agronomy: \$181,824 for 12 months from U.S. Public Health Service for "Analysis of the anaerobic stress response in maize."

Sonya B. Salamon, Human Development and Family Studies, **Richard L. Farnsworth**, Agricultural Economics, and **Donald G. Bullock**, Agronomy: \$72,018 for 24 months from USDA for "Social and cultural factors affecting sustainable farming systems and the barriers to adoption."

John W. Santas, International Agriculture: \$99,415 for 10 months from Public Administration Service for "Agro technical extension component of World Bank funded China agricultural support."

Lawrence B. Schook and **Bryan A. White**, Animal Sciences: \$108,000 for 60 months from USDA for animal genetics.

Lawrence B. Schook and **Harris A. Lewin**, Animal Sciences: \$60,000 for 12 months from Binational Agricultural Research Development for "PCR-based genotyping of the swine major histocompatibility complex."

Lawrence B. Schook, Animal Sciences: \$211,374 for 60 months from U.S. Public Health Service for "Dimethylnitrosamine effects on cellular immunity."

Arthur J. Siedler and **Bruce M. Chassy**, Food Science: \$6,000 for 12 months from US FDA for IIT cooperative agreement.

F. William Simmons, Agronomy: \$67,152 for 7 months from U.S. Army for "Hydrologic and waste treatment characteristics of vegetated sand filter systems."

Keith W. Singletary, Foods and Nutrition: \$124,602 for 12 months from U.S. Public Health Service for "Dietary ethanol and initiation of dmbs tumorigenesis."

Mary Ann L. Smith and **L. Arthur Spomer**, Horticulture, and **M. Dolores Barber-Jiménez**, Food Science: \$195,000 for 36 months from USDA for "Bioprocess strategy to amplify natural plant pigment production in vitro."

Terrance L. Smith, Food Science: \$10,050 for 12 months from American Heart Association for "LDL metabolism in vitro under magnesium deficiency."

Jesse Thompson, Administration, and Michael L. Jeffries and Otis G. Williams, Campus Administration: \$65,000 for 12 months from Illinois Board of Higher Education for "Illinois minority science internship program."

Walter L. Townsend and **Jimmy L. Shonkwiler**, Extension: \$9,840 for 24 months from Ill. Soybean Program Operating Board for "Soybean best management practices."

John C. van Es, Agricultural Economics: \$22,050 for 16 months from Rockefeller Foundation for "Soil erosion perception among smallholder farmers: its effect on farmer's adaptive soil conservation effort and its personal. . ."

Lila O. Vodkin, Agronomy: \$78,646 for 24 months from American Soybean Association for "Targeting agronomically important genes in soybean by rapid analysis of near isogenic lines."

Karl E. Weingartner, **Wilmot B. Wijeratne**, and **Kukiati Tanteeratarm**, International Agriculture: \$226,900 for 12 months from National Agriculture Research Program, Cairo, Egypt for "Soybean utilization cooperative technical assistance program."

Bryan A. White, Animal Sciences: \$300,000 for 36 months from USDA for "Enzymatic and genetic analysis of ruminococcus cellulases."

Jack M. Widholm, Agronomy: \$50,000 for 24 months from Amoco for a technical services agreement.

David J. Williams, Horticulture: \$95,000 for 24 months from Ill. Dept. of Energy and Natural Resources for "UI animal, landscape and mixed waste composting and recycling technology transfer." ▼

Administrative Appointments

Donald K. Layman was named director of the School of Human Resources and Family Studies. He became acting

director in August 1991 when director Sharon Y. Nickols resigned for a position at the University of Georgia.

A professor of nutrition and research professor of internal medicine, Layman will also serve as an assistant director of the Illinois Agricultural Experiment Station. He has served as chairman and



Donald K. Layman, director of the School of Human Resources and Family Studies

graduate program coordinator in the Division of Foods and Nutrition and on SHRFS executive committee. A native of Kewanee, Layman received his B.S. and M.S. degrees in bio-chemistry/organic chemistry from Illinois State University. His Ph.D degree is in human nutrition from the University of Minnesota in St. Paul. He joined the UI faculty in 1978.

Layman's research is focused on nutrition requirements for protein and energy with special interest in growth and growth recovery after malnutrition or trauma. His is widely recognized for his knowledge of muscle growth and development, exercise, and fitness.

Gary L. Rolfe, head of the Department of Forestry, was named interim associate director of the Illinois Agricultural Experiment Station effective August 1. He will serve in this capacity until a new associate director is on the job to replace **Benjamin A. Jones**, who retired last summer.

Rolfe earned his B.S., M.S., and Ph.D. degrees from the UI and joined the faculty in 1972. He served as assistant director of the Experiment Station from 1977 to 1971 before being appointed head of the Department of Forestry.

Paul D. Shaw, professor of biochemistry in the Department of Plant Pathology, has been named interim head of the department. He will replace **Richard E. Ford**, who stepped down as department head after 20 years in that position. Shaw will serve until a permanent department head is named.

Sarahelen Thompson and **Richard E. Warner** have been named interim assistant directors of the Agricultural Experiment Station. Both positions are designed to provide program leadership for current issue areas.

Thompson, associate professor of agricultural economics, has responsibilities in the area of strategic marketing and the issues of funding and college organization. She will be working with funding groups, government agencies, and other experiment stations.

Warner is director of the Center for Wildlife Ecology in the State Natural History Survey. He is assuming responsibility for the agro-ecology program that was under the guidance of John Gerber prior to his leaving. ▼

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You've probably read by now that our College of Agriculture has been ranked as one of the top 10 places to receive an agriculture education in the U.S. The rating came from a survey Farm Futures magazine conducted among agriculture deans across the country. § "The best schools are delivering an education that's every bit as thorough as in the past,

but they're doing it with fewer resources," the magazine said.

"The top ten, ag deans say, offer programs with unusual breadth."

On the cover: The greenhouses in the Ornamental Horticulture Building provide teaching opportunities for faculty such as Robert M. Skirvin (left foreground) and Marvin C. Carbonneau (right background).

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Editor Richard C. Bogren
Designer Joseph Kukella
Photographer David Riecks

News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: AgriView, Office of the Dean, 101 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801.

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This issue is printed on recyclable paper.

The magazine declined to rank the schools one through 10; it was satisfied merely to list them. We're honored to be on this list. But we deserve to be there. Although we're in excellent company, we've always considered our college to be at or near the top. (Of course, the other deans in these schools probably say that, too.)

It's particularly noteworthy that the survey was taken among our peer institutions. Even more important, these schools were measured by their ability to provide quality educations for their students.

What does it mean to us to be in the Top 10?

• It means we have a position to maintain. Every school that wasn't on the list—and some good ones were left off—will be trying hard to be in this group should a poll be taken again. We have to work just as hard to stay there. Good competition keeps us and everyone else trying harder and gives all our students outstanding educations.

• It means our current students, our prospective students, and even our former students expect the education they receive from us will help them become and remain successful. As faculty and staff of this college, we must be diligent in keeping up with the latest knowledge and be prepared to confer it on our students and around the state.

• It means we must maintain our pace in research, because through research we explore the newest frontiers of knowledge and refine the latest advances in science and technology—those aspects of higher education our state requires and we're committed to deliver.

• Finally, it means we have a positive story to tell to our supporters who have worked hard to help us attain the status of being a Top 10 college of agriculture and are working to help us maintain this prestigious position.

The people who give us financial, political, and moral support all share in our pleasure. But we cannot be satisfied. We must continue to do better in the future, even with what *Farm Futures* calls "fewer resources."

Yes, we do offer considerable breadth. And quality. And that must continue. ▼

Michael T. Aiken, former provost of the University of Pennsylvania in Philadelphia, assumed the duties of chancellor on the Urbana-Champaign campus on July 1. He succeeds Morton W. Weir, who held the position since 1988.

Aiken, 61, is an internationally recognized sociologist who has specialized in the analysis of organizations and issues of community power and social change. A native of El Dorado, Arkansas, he earned his bachelor's degree at the University of Mississippi and his master's and Ph.D. degrees from the University of Michigan.

From 1963 to 1984 Aiken was on the faculty at the University of Wisconsin, Madison, where he was chair of the Department of Sociology from 1976 to 1979 and was associate dean of the College of Letters and Sciences from 1980 to 1982. He went to the University of Pennsylvania in 1984 and was dean of the School of Arts and Sciences from 1985 to 1987. In 1987 he became provost—the university's chief academic officer.

"Dr. Aiken is a distinguished scholar and seasoned academic administrator," said UI President **Stanley Ikenberry** when Aiken's selection was announced. "His experience is broad and deep and will guarantee strong leadership for issues such as strengthening our commitment to high-quality undergraduate education, enhancing our position as a major research university, and making the difficult choices regarding priorities."

Aiken says his experiences at the University of Michigan and University of Wisconsin give him an appreciation and understanding of the Midwestern tradition of big, strong public universities. "I'm no stranger to the history and tradition of land-grant universities," he says. "My job is to make it possible for this history and tradition to continue."

"I'm absolutely delighted that Dr. Aiken accepted the position," said Dean Gomes, who was a member of the search committee that assisted President Ikenberry and the Board of Trustees in the selection of a new chancellor. "He has the experience, the energy, and the vision to effectively lead this campus."

Aiken is married to Catherine Comet, musical director of the Grand Rapids (Michigan) Symphony Orchestra. The couple has a sixteen-year-old daughter, Caroline. ▼



Chancellor Michael T. Aiken

Congressman visits research laboratory

U.S. Representative Richard J. Durbin (D-Springfield) was on campus on April 12 to visit the National Soybean Research Laboratory located in the remodeled Environmental and Agricultural Sciences Building. The newly constructed laboratory was dedicated on September 18.

Durbin joined college and university administrators in a press conference following a tour of the facility, which was then in the final stages of construction.

"It's a good investment," Durbin said of the NSRL. "The science is there and it will be a focal point for health research."

"We can't back off and apologize for ag research," he added.

Durbin, currently chairman of the House Appropriations Subcommittee on Agriculture, was a key member of the Illinois congressional delegation that helped secure \$5 million in federal funds for the research facility on the UI campus. He said the UI is an ideal location because it's the home of the world's largest soybean germplasm collection and is in the largest soybean-producing state. ▼

Rep. Richard Durbin (second from left) was joined by Dean W.R. "Reg" Gomes, Chancellor Morton W. Weir, and Chancellor-designate Michael Aiken in a press conference at the National Soybean Research Laboratory on April 12.



Curriculum revitalization process continues

Note that it is not a question of doing away with the specialist. It is a question of retaining some capacity to function as a generalist, and the capacity to shift to new specialties as circumstances require. John W. Gardner in *Self-Renewal*.

Grant funds multimedia development

The College of Agriculture curriculum revitalization process will include the increased use of multimedia computer systems that are already being used in some classes. Homework will become more interesting as students sit in front of powerful computers with vivid and colorful graphics.

Warren Wessels, Rebecca McBride, and John Schmitz were awarded a \$10,000 grant for a high-speed Macintosh computer to develop hypertext materials for Ag 100/HRFS 100.

This new multimedia system, called the *Discovery System*, will allow students to do some of their weekly readings and assignments, explore relevant resources like electronic databases, communicate with other members of their discussion section, and make use of supplementary tutorials on topics like critical thinking.

One discussion section in Ag 100/HRFS 100 will test the system this fall.

"The writing is on the wall," Schmitz says. "Today's students are graphic oriented. Multi-media are excellent supplements to teaching. They expand the instructional possibilities. But there's still no substitute for reading books or listening to a good lecture."

The College of Agriculture is starting the second year of a two-year, USDA Higher Education Challenge Grant that's provided funds to revitalize the undergraduate curriculum. This curriculum revitalization project is intended to prepare students better for the changing world they'll encounter when they leave the university and enter the world of commerce.

"We're continuing to reevaluate and revise our curriculum," says **William L. George**, associate dean and director of academic programs for the college. "Our goal of the project is to provide students with an education for the 21st century."

"We want our students to see the big picture," George adds. "We want them to be able to put their subject-matter education into perspective."

Revitalization efforts include introductory courses, problem-solving courses, and capstone courses. They actually have their roots in individual faculty initiatives in areas like computerized instruction, systems thinking, and interdisciplinary studies. These faculty experiences have been used as the foundation upon which the college has begun refining and defining college-wide teaching programs. (Previous issues of *AgriView* have included articles on Ag 100, AgEcon 100, and AgEcon/AnSci 199j.)

One aspect of this revitalization is the continuing transformation of Ag 100. Two years ago it was changed from a college orientation course into an introduction to the issues facing the modern food production and distribution system. This year, students from the School of Human

Resources and Family Studies will join students from agriculture curricula in the class.

"It's at the heart of the freshman discovery program," George says. "Ag 100/HRFS 100 will include all first-year students in the college."

"The initial changes in Ag 100 have continued to evolve," explains assistant dean **Warren K. Wessels**. "For the 1993 fall semester, Ag 100 and HRFS 100 are being combined to even broaden the scope of the freshman experience."

The course will continue to feature current topics presented by leading authorities in the college, and small-group discussion sections will still meet and be led by faculty members. The syllabus will continue to emphasize writing.

This year will focus on critical issues that will be presented as aspects of five basic systems:

- the environmental system;
- the food and fiber system;
- the science and new technology system;
- the human environment system;
- the global system.

Students will be divided into 20 groups to discuss the issues related to each system.

"All our discussion leaders are faculty," says assistant dean **Rebecca J. McBride**. "Their participation is above and beyond what they're required to do. They're participating because they want to be involved with these students. We're developing an extensive resource packet for

students that will also serve as a guide for the discussion leaders."

"We want to provide students with the ability to employ critical thinking and problem-solving skills in conjunction with their scientific and technical specialties to solve problems and manage enterprises," Wessels says. To do this, Ag 100/HRFS 100 will begin introducing soft systems to first-year students, and extensive study materials will also be included.

"It's important for new students especially to understand that agriculture is a system, and that it operates within larger systems of our society," George says. "Our work with the freshman discovery program is designed to present our students with the big picture; to show them that whatever they do impacts on others and on society as a whole."

"The presentations aren't intended to be intensive," Wessels explains. "We want to show relationships, the big picture, and develop awareness of the issues."

"Other colleges on campus do nothing like this," he adds. "We're leading the way in integrating scientific and technical specialties with critical thinking and problem solving."

The introduction of soft systems throughout the curricula is under the leadership of **John Schmitz**, visiting assistant professor and curriculum

coordinator in the Office of Academic Programs.

"As we implement new curriculum objectives, we're utilizing some new teaching strategies and technologies," Schmitz says. "For example, we are encouraging students to use *concept maps* to help visualize complex problems and systems. In fact, we are working to provide *rich visuals* to students as often as possible—a picture really is worth a thousand words."

A select group of faculty participated in a one-week workshop in May to learn more about soft systems and how to integrate them into their teaching — both for introductory courses and for capstone courses.

George believes soft systems must be integrated throughout the entire curriculum.

"During the workshop, many faculty realized that much of what we already teach can be presented as a holistic, integrated system," he says. "However, this integration isn't easy and will depend on the creativity of our faculty."

"I'm optimistic," he adds. "With the faculty support that we have, we're making considerable progress on all aspects of our curricular revitalization." ▼

Case studies are on the horizon

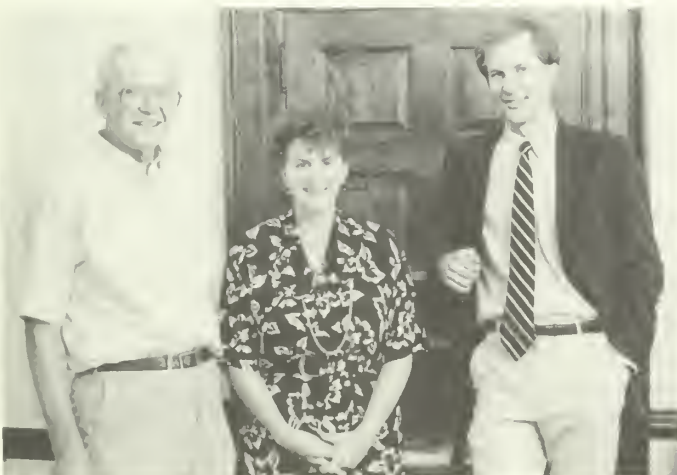
One change introduced early in the curriculum is "mini case studies" in Ag 100/HRFS 100.

"Case studies prepare students to think effectively," says John Schmitz, curriculum coordinator in the college. "They offer opportunities for problem-solving in real-world situations. Case study jump starts a student's real world experience."

"It's not always easy to see how general education works and how it all ties together," associate dean William George says. "Our faculty through mentoring and courses will help undergraduates do this. Our goal is to prepare our students for a commitment to life-long learning."

Although students can't have many real-world experience and still be in school, the college wants to prepare them for successful futures.

"The psychology of case-based teaching shows that people who acquire rich knowledge based on many cases can more easily transfer knowledge to everyday problem solving," Schmitz says. "Law, medical, and business schools have been using the case-study approach for years."



The transformation of Ag 100/HRFS 100 has been under the leadership of associate deans Warren Wessels (left) and Rebecca McBride (center) with assistance from curriculum coordinator John Schmitz (right).

Research in the Department of Animal Sciences is laying the groundwork for reducing risks from inherited diseases and improving production performance in dairy cows. Harris A. Lewin and a team of researchers are investigating laboratory tests that will allow scientists to select animals based on their genetic code rather than on statistical expectations.

The technique they're using is gene mapping.

The work in Lewin's lab is part of a national initiative aimed at identifying the location, definition, and utilization of genes affecting economically important traits. Scientists across the country are working toward three common objectives:

- To develop genome maps with enough detail to allow the selective manipulation of genotypes;
- To use genetic maps to broaden understanding of genetic components;
- To identify and determine the genes that control physiologically important processes.

The results will be used to improve animal health and productivity and develop new agricultural products.

Lewin's work with dairy cows is part of the national cattle genome research program. One of the goals of this program is marker-assisted selection of economically important traits. For example, a genetic map could be employed in dairy cattle selection to select breeding stock based on genotype rather than phenotype and avoid introducing negative characteristics into herds.

The historic method of sire selection includes closely matching attributes of both parents and then selecting young bulls

based on statistical expectations as well as on physical characteristics. After a young bull is mature, his first offspring are carefully evaluated to confirm the reliability of the genetic expectations. The end result represents a significant investment in time and money before a sire is proven. And even then, hidden characteristics may not be evident until a second or third generation.

Now, new technology that allows selection based on genetic makeup is being tested that will allow dairymen to select breeding stock based on genotype, avoiding costly performance testing and avoiding the potential of hidden imperfections.

"We need about 300 markers to cover the whole genome," Lewin says. "We have identified about 100 now. We can use these markers to distinguish genetically elite breeding bulls, and the accuracy of selection becomes much greater."

Genetic mapping follows a sequence. Scientists first define the problem, then they establish the genetic component of the problem, and then they determine how much variation is controlled by that gene. Not only are most factors controlled by multiple genes, they're also influenced by environment. One of the scientist's challenges is to evaluate the effects of genetic differences and the effects of environment as well.

Genotyping is time consuming. Because it uses quantitative traits, scientists must evaluate at least 1,000 animals to assure statistical accuracy; and each of those 1,000 animals has 300 markers. Then, those 300,000 markers must be statistically evaluated.

One major advancement in the process has been the addition of a new Automated DNA Sequencer to Lewin's lab. This apparatus uses fluorescence and lasers to sequence and analyze the bases (adenine, guanine, thymine, and cytosine) that constitute the genetic codes of all plants and animals.

The standard, manual method of sequencing allows a researcher to analyze about 1,000 bases a day while the automated sequencer can do 16,000 a day.

With this new technology, Lewin says, "It takes more time to analyze the data than to generate the data." His goal is to use the apparatus in a cost-effective, time-efficient manner.

Along with production results, scientists are also examining animal health. Bovine leukemia virus (BLV) is a type C retrovirus that infects cattle. Lewin's earlier work showed that bovine leukosis was more prevalent among high-producing cows, and many animals are able to sustain subclinical infections.

It's like a highway map

There are literally thousands of genes in a living cell. And scientists are trying to develop a method by which they can find their way among them and figure out where they are.

Following a gene map may be analogous to following a highway map. Most maps show only some of the highways, rivers, and railroads; if you can recognize where you are from what's indicated on the map, you can infer your location. A gene map may work the same way.

Scientists are attempting to chart about 300 individual genes in each agricultural species. Using these markers, they and others can find their way around the genetic make-up of an animal and evaluate selected characteristics on the most elemental level.

"A marker serves as a 'road sign' that leads where you want to go by linkage," says Harris Lewin. "Once you identify a marker, you can move to adjoining genes, and after you identify them, you can use the marker to find them again."

"Another method of gene identification is by the 'candidate gene' approach," Lewin explains. "Here, you select a known gene and then analyze it to see if it's related to what you're looking for. If it is, you've succeeded."

One of the major results to come out of Lewin's work is the discovery of an identified genetic component of BLV. BLV has the ability to convert RNA into DNA, allowing the virus to become integrated into a host cell's chromosome and cause persistent infection.

Lewin is quick to point out that genetic mapping and the resulting technology don't mean cloning or transgenic animals. "We're using the information to make more-informed decisions about parent selection," he says. "Scientists aren't trying to develop new genes. We're working with existing genetic variations and using laboratory techniques to accelerate genetic progress."

Some of their research, however, also may have applications to human health. The BLV retrovirus is similar to the HIV virus that infects humans and causes AIDS.

"We can't ethically do qualitative studies on humans," Lewin says, adding that most work that has been applied to humans has been done with mice. Nevertheless, he says, "We can translate the work with BLV to anti-viral therapy for human disease, particularly HIV."

"What we're doing is important to agriculture," Lewin says. "The 'how' of what we're doing also has applications to human health." ▼

Teaching Academy announced

The 1993-96 appointments to the College of Agriculture Academy of Teaching Excellence were recently announced by **William L. George**, associate dean and director of academic programs, and dean **W.R. "Reg" Gomes**.

Faculty named are:

- **Philip Buriak**, associate professor, Department of Agricultural Engineering, 1993 recipient of the Karl E. Gardner Outstanding Undergraduate Adviser Award;
- **Robert A. Easter**, professor, Department of Animal Sciences, at-large;
- **Raymond M. Leuthold**, professor, Department of Agricultural Economics, at-large;
- **Gerald L. Riskowski**, associate professor, Department of Agricultural Engineering, 1993 recipient of the Young Faculty Award for Excellence in Teaching;
- **Shelly J. Schmidt**, associate professor, Division of Foods and Nutrition, at-large.

In addition, assistant dean **Warren K. Wessels** was appointed to fill the unexpired term of **Thomas L. Frey**, who retired at the end of the last academic year.

Three major projects funded at least in part by the U.S. Agency for International Development (USAID) indicate the proficiency of the college's International Soybean Program (INTSOY).

"The recent funding success of the INTSOY program indicates to us that others, especially USAID, recognize the contributions our researchers are making in international development," says **John J. Nicholaides**, acting director of INTSOY and associate dean and director of the Office of International Agriculture. "This work also benefits Illinois and U.S. agriculture through increased soybean utilization and exports."

An expanded role for INTSOY

USAID's Bureau of Research and Development has chosen INTSOY as one of four institutions to participate in the Postharvest Collaborative Agribusiness Support Program (CASP) beginning October 1. Postharvest CASP will incorporate four programs currently supported by USAID. They are:

- The Food and Feed Grains Institute at Kansas State University;

- The Postharvest Institute for Perishables at the University of Idaho;
- The Seed Technology Laboratory at Mississippi State University;
- INTSOY at the UI.

"This project will consolidate under one umbrella current USAID support these four institutions receive via separate cooperative agreements," says **Wilmot Wijeratne**, associate director of INTSOY. "Each of the projects will retain its identity as a center of excellence for the respective commodities."

Postharvest CASP is designed to communicate, demonstrate, and replicate science and technology to reduce postharvest losses and resolve postharvest problems in four areas: food and feed grains, fruits and vegetables, seeds, and soybeans and other grain legumes.

The UI has been given expanded responsibility to include other grain legumes in addition to soybeans. INTSOY will restructure its program of applied research, training, technical assistance, and information dissemination to reflect this expanded mandate.

USAID has committed \$7.5 million for the five-year project. INTSOY should receive nearly \$1.6 million, which will be augmented by another \$5.3 million from other sources.

Overall management for the Postharvest CASP will be at Mississippi State University.

Technology transfer in Egypt

Another current INTSOY project is with

the Egyptian Food Technology Research Institute (FTRI) and is sponsored by the Egyptian National Agriculture Research Project funded by USAID, Cairo, Egypt.

The Soybean Utilization Cooperative Technical Assistance Program is intended to strengthen the Egyptian soybean industry by introducing new and innovative processing methods and by developing nutritious soy foods for the Egyptian diet. Egypt is a major importer of U.S. soybeans, and the utilization program is expected to boost soy consumption in that country.

The program will strengthen the food processing capabilities of the FTRI by providing equipment and training personnel. INTSOY will help establish a model soybean processing plant at FTRI and help implement a vigorous applied-research program to support private sector processors.

"Egyptian private entrepreneurs are receiving training in the U.S. and exposure to the U.S. soybean industry," Wijeratne explains.

Seven Egyptian scientists already have received short-term training, and one master's program and five post doctoral programs are underway at the UI and other U.S. institutions. In addition, INTSOY has hosted 12 private industry representatives from Egypt for instruction at the UI and tours at eight U.S. soybean processors.

The 28-month project began in May 1992 with a total budget of \$1.77 million. **Karl Weingartner** is principal scientist for this buy-in to INTSOY.

Farming in the former Soviet Union

A third USAID-sponsored project is set to begin this fall in the Kherson Oblast of Ukraine. The Black Sea Model for Privatized Postharvest Grain Systems will be implemented under USAID's initiatives for food systems restructuring in

the newly independent states of the former Soviet Union.

"The overall objective of the project is to establish a sustainable and replicable model for postharvest grain systems using state-of-the-art technology and expertise from the United States," Wijeratne says.

USAID is funding the project through the Citizens Network for Foreign Affairs in Washington, D.C. based on a joint proposal submitted by Freedom Farm International (FFI), an Illinois agribusiness, and INTSOY.

FFI will work with recently privatized Ukrainian farms to establish an integrated farming system that will include corn and soybean production, on-farm feed and food processing, and feed utilization for improving animal productivity. Ukrainian partners will be trained in agricultural implements, cultural practices, and the basics of free enterprise.

The project will include building a port elevator for grain and processed products at a strategic location on the Dnieper River. Plans also call for a processing plant for producing value-added food and feed products made from soybean and corn. Soybean processing will be by extrusion-aided screw pressing, which was developed by INTSOY and the UI Department of Food Science. UI and private sector consultants will introduce American feed technology.

INTSOY will participate in the project through a sub-contract with FFI to provide training and technical assistance as well as project management. INTSOY will receive nearly \$400,000 for its contributions. ▼



Wilmot Wijeratne (second from right), associate director of INTSOY, explains to a group of Egyptian business representatives an extruder-screw press combination that produces high-quality soy meal and oil. The Egyptian group was on campus learning about soybean processing technology that will be developed in their country.

Sea Grant report offered

"Sea what?" may have been a common reaction when people in the heart of the Midwest first heard about the Illinois-Indiana Sea Grant Program. But it has made an impact.

Sea Grant's Role in a Decade of Change, a recently released program report, highlights Sea Grant's activities in research, marine extension, education, and communications during the past decade.

The National Sea Grant College Program was created in 1966 and follows the same model as the land-grant system. One of 29 programs in coastal and Great Lakes states, Illinois-Indiana Sea Grant remains the newest.

Jointly administered by the UI and Purdue University, the program focuses on promoting the wise use of Lake Michigan and related water resources. Activities are targeted toward increased economic benefits within a sustainable environment.

Current research includes control of zebra mussels and Lake Michigan water quality. Extension activities stimulate economic development and create a more marine-literate public. Education programs include promoting wetlands awareness and "Gulliver, the Talking Gull," an interactive exhibit on The Great Lakes.

Copies of *Sea Grant's Role in a Decade of Change* are available from Illinois-Indiana Sea Grant Communications Office, University of Illinois, 65a Mumford Hall, 1301 W. Gregory Dr., Urbana, Illinois 61801.



Several of the 1992-93 College of Agriculture retirees were on hand at a reception on May 5, 1993. Pictured left to right, front row: Bob Hayward, Larry O'Reilly, Jan Whitman, Carolyn Swope, and Dean W.R. Gomes (not retiring); second row: Gordon Wakey, Errol Rodda, Bob Seif, and Judie Fair; back row: Bob Spitze and Tom Frey.

42 Retire From College

Earl B. Patterson, associate professor of plant genetics and director of the maize genetic stock center in the Department of Agronomy, leads the list of 42 individuals who retired from the College of Agriculture during the past year. Patterson finished a career of more than 41 years in the college when he retired on August 20.

Others who retired during the past year include the following.

Patsy R. Luedke, extension adviser/home economics, Coles County, CES

Robert D. Seif, professor, Agronomy

Robert W. Hayward, extension adviser/agriculture, Bureau County, CES

Shirley W. Martin, regional director, Cooperative Extension

Jo Carolyn Swope, extension adviser/home economics, Vermilion County, CES

Mary J. Whitman, chief clerk, Agricultural Economics

Robert G.F. Spitze, professor, Agricultural Economics

John Duffin, extension specialist/computer education, Cooperative Extension

R. Michael Hardimon, extension adviser/agriculture, St. Clair County, CES

J. Curt Eisenmayer, extension adviser/agriculture, Henderson County, CES

Nancy J. Moore, extension adviser/home economics, McHenry County, CES

Margaret L. Esposito, extension adviser/home economics, McLean County, CES

Kathryn L. Harrison, extension adviser/home economics, Jackson County, CES

Dorothy Buchanan, secretary, International Agriculture

Larry L. Camp, extension adviser/agriculture, Clay County, CES

Elizabeth Fear, secretary, Jasper County, CES

M. Lucille Steiner, extension adviser/home economics, Wayne County, CES

Harold S. Butler, assistant natural science technical, Agronomy

Betty Dehnam, secretary, Moultrie/Douglas County, CES

Patricia Leadbetter, secretary, Union County, CES

Benjamin A. Greiner, extension adviser/FBFM, CES

Richard B. Malek, associate professor, Plant Pathology

Errol D. Rodda, professor, Agricultural Engineering

Marcella Swanson, secretary, Cook Region 3, CES

Eddie L. Miller, work program participant, Cook I, CES

Gordon E. Wakey, extension adviser/FBFM, CES

Judith S. Fair, agricultural gardener, Horticulture

Martha S. Hannah, community worker, Rock Island County, CES

Lawrence B. O'Reilly, professor, Human Development and Family Studies

Thomas L. Frey, professor, Agricultural Economics

Clarence J. (Jim) Kaiser, associate professor, Agronomy

Karmen J. Martinie, secretary, Agricultural Engineering

Willard Visek, professor, Nutritional Science

Winona S. Kennedy, secretary, DeKalb County, CES

Marjorie Madison, community worker, Cook I, CES

Geraldine B. Mueller, secretary, Jackson County, CES

Frances M. Magrabi, professor, Consumer Science

Ida M. Bragg, secretary, Moultrie/Douglas County, CES

Eleanor Koch, secretary, Region I, CES

Roger Barnard, lecturer, Agricultural Communications and Education

Nancy J. Phillips, secretary, Cooperative Extension

College announces 1993 promotions

Twelve faculty and three research specialists in the college were promoted during the summer. They include:

To professor: Agricultural Economics: **Robert J. Hauser**; Agronomy: **Emerson D. Nafziger**; Animal Sciences: **Floyd K. McKeith** and **Neal R. Merchen**; Forestry: **Sandra L. Brown**; Human Resources and Family Studies: **Reed W. Larson**; Plant Pathology: **Jerald K. Pataky**.

To associate professor: Agricultural Communications and Education: **Ann E. Reisner**; Agricultural Entomology: **Michael E. Gray**; Agronomy: **Frederic L. Kolb**, **A. Lane Rayburn**, and **F. William Simmons**.

To senior research specialist in agriculture: Agronomy: **Ronald A. Hines**, **Douglas J. Maxwell**, and **Scott L. Vance**.

In addition, 32 employees were promoted in the Cooperative Extension Service as follows:

To adviser: **Diane M. Baker**, **Linda Eilks**, **Mary Lou Garbe**, **Rodney Gieseke**, and **Lisa Woessner**.

To senior adviser I: **Wilbon Anthony**, **Dale Baird**, **Ed Billingsley**, **Beverly Joan Blaser**, **Carroll Anne Bonn**, **Dennis Bowman**, **Mary Lou Carlson**, **Becky Douglas**, **Connie Frederking**, **John Fulton**, **Ted Funk**, **Denise Kistner**, **Richard K. Knipe**, **William Million**, **Larry Paszkiewicz**, **Deborah Simmons**, **Lois Smith**, **Sarah Todd**, **Larry Wilson**, and **Alvin Zwilling**.

To senior adviser II: **Barbara Dahl**, **Karen Gehrt**, **Katherine Reuter**, **Paula Robinson**, **Normal Schott**, **Glenn Seeber**, and **Sheri Siebold**.



1993 Paul A. Funk Recognition Awards were presented to (left to right) Loren E. Bode, Peter J. Barry, and Raymond M. Leuthold.

Peter J. Barry, professor of agricultural finance in the Department of Agricultural Economics, **Loren E. Bode**, professor of power and machinery extension in the Department of Agricultural Engineering, and **Raymond M. Leuthold**, professor of marketing in the Department of Agricultural Economics, were honored with Paul A. Funk Recognition Awards at the college's annual recognition banquet in March.

Barry is nationally recognized as a leader in agricultural finance research and teaching. He is the foremost U.S. scholar on risk and risk management responses by farmers and has pioneered theoretical approaches for analyzing firm responses to risk. The author of three books on risk and investment, Barry has influenced changes in credit programs, financial regulations, and U.S. agricultural credit policies and programs.

Bode is recognized throughout the world as an authority on equipment and techniques for applying pesticides by growers, custom applicators, pesticide dealers, and agricultural chemical manufacturers. He prepared the original Illinois Pesticide Applicator Study Guide to prepare extension personnel to train more than 75,000 farmers for certification as private pesticide applicators.

Leuthold's specialization is agricultural marketing, price analysis, and commodity futures markets. An internationally recognized authority on the use of futures markets to manage risk, he pioneered analysis of livestock futures markets. He

was the first to analyze forward pricing and risk management and to model the cash-futures price relationships of livestock futures contracts.

Presented annually for outstanding professional achievement and major contributions to the betterment of agriculture, the Funk Awards are supported by the Paul A. Funk Foundation of Bloomington, Ill., as a memorial to the late Paul A. Funk, who attended the College as a member of the Class of 1929.

Six members of the college faculty were presented Faculty Awards for Excellence at the College's annual recognition banquet on March 30. The awards recognize outstanding professional achievement and demonstrated excellence in teaching, research, or extension.

Robert A. Aherin, associate professor of farm safety, was recognized with the Young Faculty Award for Excellence in Extension. He developed an internationally recognized program on agricultural safety and health and is considered to be one of the very top safety specialists in the nation.

Donald P. Briskin, professor of plant physiology, received the Young Faculty Award for Excellence in Research. An international leader in research on the biochemical mechanisms of plant membrane transport, he investigates the theoretical basis of how mineral nutrients move from the soil solution, through plant roots, and into the growing plant.

Jimmy H. Clark, professor of ruminant nutrition, received the Senior Faculty Award for Excellence in Research. Focusing on the high-producing dairy cow, he has been a leader in the study of ruminal fermentation and of the passage of dietary and microbial proteins, amino acids, long-chain fatty acids, and other nutrients.

Thomas L. Frey, professor of agricultural finance, received the Senior Faculty Award for Excellence in Teaching. He was cited for his dedication, leadership, innovation, and excellence in teaching in the Department of Agricultural Economics. He teaches agricultural finance and agribusiness and serves as a student adviser.

Gerald L. Riskowski, associate professor of structures and environment, was presented the Young Faculty Award for Excellence in Teaching. He was recognized for giving strong initiative and leadership to the area of light frame agricultural structures and establishing a strong, viable program in the structures and environment area.

John C. Siemens, professor of power and machinery extension, was presented the Senior Faculty Award for Excellence in Extension. He is considered a national leader in developing and delivering extension and research programs in the areas of tillage systems for corn and soybeans, farm machinery management, and soil compaction.

Four academic professional staff members in the college were presented Awards for Excellence for sustained excellence or for innovative and creative programs.

Gene McCoy, research animal specialist in the Department of Animal Sciences, was recognized for sustained excellence. McCoy manages a one-half million dollar budget; coordinates numerous research trials; and manages the nutrition, genetics, and health programs of the UI's 600-head dairy herd.

Robert E. Dunker, an agronomist in the Department of Agronomy,



Philip Buriak (left) received the 1993 Karl E. Gardner Outstanding Undergraduate Adviser Award, and Douglas F. Parrett (right) was the 1993 John and Henrietta Downey Spitler Teaching Award winner.



The 1993 Faculty Award for Excellence winners were (from left to right) Thomas L. Frey, Gerald L. Riskowski, Robert A. Aherin, John C. Siemens, Jimmy H. Clark, and Donald P. Briskin.

was recognized for sustained excellence. A national leader in soil management associated with improving soils that have been severely disturbed by surface mining of coal, Dunker manages a research program that has been the major source of new technology for restoring abused minelands to productive agricultural uses in the Midwest.

David R. Pike, an agronomist in the Department of Agronomy, was cited for innovation and creativity. Pike is coordinator of the Pesticide Impact Assessment Program (PIAP) for the college and serves as extension weed specialist. He recently created WEEDFAX, a computer software program for weed management in the upper Midwest.

Jimmy L. Shonkwiler, assistant to the director for fiscal affairs with the Cooperative Extension Service, was cited for innovation and creativity. He was cited for an ingenious approach to managing benefits costs for CES employees in local units. The idea is saving local CES units 20 percent of their salary/benefits costs of nearly one million dollars annually.

Philip Buriak, associate professor of agricultural engineering, was presented the Karl E. Gardner Outstanding Undergraduate Adviser Award at the College's annual recognition banquet on March 30. The award was established by George R. and Arthur H. Bunn of the Bunn-O-Matic Corporation of Springfield to honor Gardner, a former associate dean and director of resident instruction in the college. Buriak was cited as

an outstanding counselor and classroom teacher who treats his students in a most conscientious and helpful manner. Students are his first priority. He has attracted students to the agricultural mechanization curriculum and was instrumental in creating the John Deere Mentor Program.

Douglas F. Parrett, associate professor of animal sciences, was presented the John Clyde and Henrietta Downey Spitler Teaching Award at the College's annual recognition banquet on March 30. The award was established by Mildred Spitler Johnson of Urbana in honor of her parents. Her father was associate director of extension at the UI when he retired in 1949. Parrett was cited as a well-established educator known for his unique ability to translate scientific principals into everyday practice. In addition to a heavy teaching and student advising load on campus, Parrett has an extensive beef cattle extension program and has taught extramural courses at community colleges.

Arthur J. Siedler, Department of Food Science, has been named a Fellow of the Institute of Food Technologists.

Edward G. Perkins, Department of Food Science, has been selected as the first recipient of the Stephen S. Chang Award for Lipid or Flavor Science.

Three members of the Office of Agricultural Communications and Education were recognized with 1993 Awards of Excellence by the International Association of Agricultural Communicators in Education. **James F. Evans** was recognized for communications management, **Robert G. Hayes** was cited for research, and **Edwin W. Vernon** was honored for telecommunications.

The UI agricultural communications program has been ranked second in the nation by a recent survey of deans of resident instruction in agriculture colleges in the U.S.

Several members of the Office of Agricultural Communications and Education were recognized by the 1993 Agricultural Communicators in Education Critique and Awards Program.

Illinois Research magazine received first-place honors in the four-color periodicals category. The production team included **Nancy A. Nichols**, **Phyllis C. Picklesimer**, **Anita A. Povich**, **Tina M. Prow**, **David A. Riecks**, **Robert D. Sampson**, and **Paula H. Wheeler**.

Tina Prow won third place in the magazine writing category for an *Illinois Research* article "Taking Care of Business in Rural Illinois."

In the television documentary category, "A Quiet Change in Illinois Karst Coun-



Academic Professional Awards for Excellence for 1993 were presented to (left to right) Jimmy L. Shonkwiler, Robert E. Dunker, Gene McCoy, and David R. Pike.

try" earned second place honors for **Gary L. Beaumont**, who served as associate producer, and **Randall L. McCabe**, who wrote, photographed, and produced the 28-minute documentary.

The *Chronicle of the College of Agriculture*, a joint publication of the Office of Resource Development, the Agriculture Alumni Association, and the HRFS/Home Economics Alumni Association, was presented a bronze medal by the Council for Advancement and Support of Education (CASE) in the category "individual alumni relations publications." **Richard C. Bogren** was editor, and **Nancy J. Loch**, Office of Agricultural Communications and Education, was designer.

A UI extension consumer education program on environmental concerns has been cited for excellence by the USDA Cooperative Extension Service. **Brenda J. Cude**, division of consumer sciences, and **Kathleen Brown**, cooperative extension, developed and implemented the program "Environmental Consumer Education: Impacting Consumer Decisions and Public Policy."

Michael F. Hutjens, animal sciences, received the UIUC Award for Excellence in Extramural Teaching.

James B. Sinclair, plant pathology, has been elected a Fellow of the American Phytopathological Society. He will receive the official certificate at the annual APS meeting in Nashville, Tennessee, in November.

Munir Cheryan, **Minish Shah**, and **Jóse Escobar**, food science, received the National Corn Growers Association's 1993 Research and Commercialization Award. The award included \$10,000 from ICI Americas for further research. The award was in recognition for advancing processing technology of CMA (calcium magnesium acetate), a non-corrosive road de-icer.

Daren M. Eastburn, plant pathology, was awarded a \$9,200 grant through the Undergraduate Instructional Awards Program for video presentations for introductory plant pathology course.

Janice M. Bahr, animal sciences, was the recipient of the Merck Award for Achievement in Poultry Science. The award is given for distinctive contributions during a period of not more than seven years preceding the annual award.

Research

Research programs in the College of Agriculture are enhanced considerably by gifts and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the college, including the following:

Beatrice H. Bagby and **Jimmy L. Shonkwiler**, cooperative extension; \$410,480 for 6 months from Illinois Department of Aging for "Cooperative extension senior series."

Wayne L. Banwart, agronomy; \$45,000 for 12 months from Argonne National Labs for "Field evaluation of plant uptake of explosives from soil" and \$3,500 for 7 months from U.S. Army Construction Engineering Research Laboratory for "Sample analyses."

Gary L. Beaumont, agricultural communications and education; \$15,000 for 11 months from USDA for "Buried treasure: fifty ways to protect groundwater."

Frederick E. Below, agronomy; \$43,590 for 12 months from Illinois Department of Agriculture for "Sources and forms of nitrogen for optimum corn production."

Hans P. Blaschek, food science, and **Roderick I. Mackie** and **Bryan A. White**, animal sciences; \$95,590 for 12 months from Midwest Plant Biotechnology Consortium for "Development of clostridium acetobutylicum strains with superior saccharification and fermentation. . ."

Hans P. Blaschek, food science; \$4,950 for 27 months from Illinois Corn Marketing Board for "Genetic manipulation of clostridium acetobutylicum for improved butanol production from corn starch."

Donald G. Bullock, agronomy; \$31,637 for 12 months from Illinois Department of Agriculture for "Evaluation of the Minolta Spad T20 chlorophyll meter for on farm N management of corn in Illinois."

James J. Betustak and **Susan A. Soukup**, cooperative extension; \$25,000 for 13 months from U.S. Department of Housing and Urban Development for "Lake County community development block grant."

Munir Cheryan, food science; \$15,000 for 12 months from Illinois Department of Energy and Natural Resources for "Increasing the effects of ethanol production through the use of a membrane technology" and \$98,000 for 24 months from Illinois Corn Marketing Board for "Potassium acetate from corn."

David L. Chicoine and **Peter J. Barry**, agricultural economics; \$70,000 for 8 months from Farm Credit Administration for "Stress study of agricultural real estate loans."

Poo Chow, forestry: \$38,969 for 12 months for "Durability of wood crossties," and \$34,017 for 12 months for "Fatigue life of wood," both from Association of American Railroads.

Leslie L. Christianson, Gerald L. Riskowski, and Donald L. Day, agricultural engineering: \$59,869 for 24 months from Center for Indoor Air Research for "Air and contaminant movement study for improving ventilation design of partitioned office rooms."

Donald L. Day and Ruihong Zhang, agricultural engineering, and **Robert A. Easter**, animal sciences: \$17,988 for 12 months from National Pork Producers Council for "A study of the effects of room air flow on gas release from manure and development of gas release prediction models" and \$12,000 for 12 months from Illinois Pork Producers Association for "Predicting generation rates of air contaminants from manure storage."

Sharon M. Donovan, foods and nutrition, **Jack Odle**, animal sciences, and **Terry Hatch**, pediatrics: \$133,270 for 12 months from U.S. Public Health Service for "Insulin-like growth factors in intestinal development."

James K. Drackley, animal sciences: \$38,500 for 24 months from Fats and Proteins Research Foundation for "Effects of feeding tallow to dairy cows during the dry period on liver function and subsequent..."

Robert A. Easter and Michael Ellis, animal sciences: \$13,000 for 10 months from Abbott Labs Inc. for "Effect of Abbott compound A-63262 on the growth performance of starter swine."

Steven R. Eckhoff, agricultural engineering: \$38,016 for 12 months for "Development of a rapid corn milling quality screening procedure" and \$39,703 for 12 months for "Technical testing: wet milling of small corn samples," both from ICI-Garst Seed Co.

Michael Ellis and Floyd K. McKeith, animal sciences: \$6,000 for 12 months from Illinois Pork Producers Association for "Optimum slaughter weights for swine: the impact of genotype on the growth performance and carcass and meat quality characteristics."

Timothy R. Ellsworth and Charles W. Boast, agronomy: \$59,503 for 12 months from USDA for "Seasonal variations in preferential flow under corn and soybean cropping."

Robert D. Espeseth, cooperative extension: \$1,520 for 2 months from National Oceanic and Atmospheric Administration for "Conference culminating the Green Bay mass balance effort."

Herbert R. Fruhwirth and Jimmy L. Shonkwiler, cooperative extension: \$6,000 for 12 months from City of Joliet for "Neighborhood housing education project 1993."

Rex H. Gaskins, animal sciences: \$30,000 for 24 months from International Life Science

Institute — Nutrition Foundation for "Biochemical and molecular mechanisms of diminished insulin secretion..."

Karen R. Gehrt, cooperative extension: \$1,200 for 7 months from Urbana Community Development Commission for "EFNEP camp project."

George Z. Gertner, forestry: \$2,750 for 24 months from University of Minnesota for "Using artificial neural network to develop individual tree mortality component for twigs," \$38,457 for 4 months for "Providing technical and logistical management and coordination in support of the land condition trend analysis program" and \$63,157 for 12 months for "Integrated natural resource management and environmental compliance," both from U.S. Army Construction Engineering Research Laboratory.

Michael E. Gray and Kevin L. Steffey, agricultural entomology: \$16,373 for 35 months from Pioneer Hi-Bred International Inc. for "Evaluation of biological control programs for suppression of European corn borer in midwestern seed corn production."

Adrianna D. Hewings, plant pathology, and **Catherine E. Eastman**, agricultural entomology: \$45,702 for 12 months from USDA for "Barley yellow dwarf epidemiology."

Lowell D. Hill, agricultural economics: \$34,510 for 7 months from American Soybean Association for "Cost and benefits of component pricing for soybeans."

Lowell D. Hill and Karen L. Bender, agricultural economics: \$11,000 for 11 months from Rockefeller Foundation for "1990 international workshop on maize and soybean quality."

Robert G. Hoeft, Wayne L. Banwart, and Michael J. Mainz, agronomy: \$12,101 for 15 months from Illinois Department of Agriculture for "Accumulation and potential release of N in Illinois soils."

Robert G. Hoeft, Emerson D. Nafziger, and Wayne L. Banwart, agronomy: \$88,076 for 12 months from Illinois Department of Agriculture for "Determination of the effect of start fertilizer on 0-till corn in Illinois."

Donald A. Holt, experiment station: \$81,674 for 24 months from Illinois Soybean Program Operating Board for "Communications and marketing program for the National Soybean Research Laboratory" and \$15,000 for 12 months from Midwest Plant Biotechnology Consortium for "Developing an Illinois biomass network."

Donald A. Holt, experiment station, and **Jesse C. Thompson**, academic programs: \$12,390 for 4 months from USDA for "Research apprenticeship program for minority high school students."

Robert H. Hornbaker and David C. White, agricultural economics: \$51,138 for 11 months from USDA for "Policy alternatives for reducing chemicals in source areas of public water supplies in Illinois."

Yvonne A. Horton, cooperative extension: \$27,000 for 12 months from Village of Park Forest for "4-H after school program."

Donnell R. Hunt, agricultural engineering, **Rebecca J. Simon** and **Stephen Szepe**: \$57,000 for 12 months from Illinois Board of Higher Education for "1993 assistance for businesses to employ engineering/science students."

Theodore Hymowitz and Ram J. Singh, agronomy: \$151,320 for 36 months from Illinois Soybean Program Operating Board for "Development of a soybean genome map."

Michael E. Irwin, agricultural entomology: \$11,166 for 4 months from USDA for "Encapsulation of microbial control agents."

Rafael Jiménez-Flores, food science: \$104,516 for 36 months from National Dairy Promotion and Research Board for "Milk fat globule membrane modification by selective adsorption."

Benjamin A. Jones, agricultural experiment station: \$188,833 for 30 months from USDA for "Intensive commercial aquaculture research and demonstration project."

Harold E. Kauffman and Wilmot B. Wijeratne, international agriculture: \$349,999 for 9 months from U.S. Agency for International Development for "Soybean processing and utilization research."

Donald K. Layman, foods and nutrition, **Jan E. Novakofski**, animal sciences, and **Sharon M. Donovan**, foods and nutrition: \$152,550 for 12 months from U.S. Public Health Service for "Recovery from growth retardation: anabolic responses."

Margaret M. Patten, human development and family studies, and **Donald K. Layman**, foods and nutrition: \$55,378 for 12 months from Illinois Department of Children and Family Services for "Staff development coordinator of IL CCR&R system services."

Harris A. Lewin, animal sciences: \$121,440 for 12 months from U.S. Public Health Service for "Host mechanisms of resistance and susceptibility to BLV infection."

David A. Lins, agricultural economics: \$40,000 from the state of Illinois for 12 months for "Illinois farm and agri-industry finance research program."

J. Bruce Litchfield, agricultural engineering: \$35,000 for 12 months for "Seal integrity detection/feasibility study" and \$35,000 for 12 months for "MRI measurement of temperature distributions in solid foods during processing," both from U.S. Food and Drug Administration.

Michael J. Mainz, agronomy: \$19,889 for 15 months from Illinois Department of Agriculture for "The effect of four P&K rates on the draw-down and buildup of soil test layers."

Robert H. McCusker, animal sciences: \$24,000 for 12 months from American Heart Association for "Cell type and developmental aspects of insulin-like growth factor-binding protein expression in the heart."

Robert H. McCusker and Jan E. Novakofski, animal sciences: \$10,000 for 9 months from Illinois Pork Producers for "Prediction of swine growth potential using serum levels of an insulin-like growth-factor binding protein."

J. Kent Mitchell, Allan S. Felsot, and Michael C. Hirschi, agricultural engineering: \$60,000 for 12 months from USDA for "Agricultural practices for water quality improvement."

Richard L. Mulvaney, agronomy: \$28,382 for 12 months from Illinois Department of Agriculture for "Factors affecting the efficient use of nitrogen fertilizers in Illinois soils."

Charles H. Nelson, agricultural economics: \$24,000 for 24 months and \$4,800 for 5 months from Rockefeller Foundation for "Financial dualism in West Africa: contractual arrangements between borrowers and lenders."

John J. Nicholaides III and Wilmot B. Wijeratne, international agriculture: \$65,000 for 21 months from U.S. Agency for International Development for "Soybean processing and utilization research."

Cecil D. Nickell, agronomy: \$43,250 for 24 months from American Soybean Association for "Coordination of regional soybean cyst nematode tests."

Jan E. Novakofski, animal sciences: \$132,050 for 24 months from USDA for "Beef carcass evaluation and identification: development of an ultrasound based grading system."

Edward W. Osborne and Jeffrey W. Moss, agricultural communications and education: \$17,005 for six months from Illinois Board of Education for "Science applications in agriculture: BSAA - animal science course development."

Edward W. Osborne, agricultural communications and education, and **Philip Buriak**, agricultural engineering: \$16,991 for 6 months from Illinois Board of Education for "PSAA II development—phase one."

Carl M. Parsons, animal sciences: \$24,000 for 12 months from Fats and Proteins Research Foundation for "Effect of processing methods on availability of amino acids and energy in animal protein meals."

Lyle E. Paul, agronomy: \$6,128 for 12 months from Illinois Department of Agriculture for "Nutrient placement and movement under zero till conditions."

Theodore R. Peck, agronomy: \$17,700 for 12 months for "Extraction of K from Illinois soils by electro ultrafiltration," \$22,122 for 12 months for "Twice monthly field soil sampling for soil testing to evaluate reproducibility of soil test levels," \$5,230 for 12 months for "Comparison of plow layered distributed and surface applied limestone for non till crop production," \$25,594 for 12 months for "Special variability of soil pH, phosphorus and potassium levels . . .," all from Illinois Department of Agriculture.

Edward G. Perkins, food science: \$30,000 for 12 months from FDA for "Formation of isomers and off flavors during food oil processing."

Susan M Potter, foods and nutrition, and **John W. Erdman and M. Dolores Berber-Jiménez**, food science: \$365,277 for 24 months from Illinois Soybean Program Operating Board

for "Lowering risk of coronary heart disease by consumption of soy."

Anton D. Pugel, forestry: \$6,996 for 5 months from Illinois Department of Energy and Natural Resources for "Development of a directory of the primary and secondary wood manufacturers in Illinois."

A. Lane Rayburn, agronomy: \$13,000 for 24 months for "Molecular mapping of rye in wheat background by rapds" and \$14,900 for 24 months for "The role of repetitive DNA sequences in maize genome adaption and in site specific gene insertion," both from U.S. Agency for International Development.

John F. Reid and J. Bruce Litchfield, agricultural engineering: \$118,566 for 12 months from Biotechnology Research and Development Corporation for "In situ image processing for real time control of bioprocesses."

Gerald L. Riskowski, agricultural engineering: \$10,000 for 12 months from Illinois Pork Producers Association for "Corrosion of metal equipment and truss plates in swine buildings."

Jerry W. Robinson, agricultural economics: \$12,000 for 8 months from the state of Illinois for "Helping rural communities prepare for economic development" and \$98,000 for 12 months from W.K. Kellogg Foundation for "Helping rural communities prepare for economic development."

Gary L. Rolfe, forestry: \$99,484 for 12 months from U.S. Army Construction Engineering Research Laboratory for "U.S. Army land condition trend analysis and the Nature Conservancy biological conservation data systems linkage."

Gary L. Rolfe, Mark B. David and George Z. Gertner, forestry: \$21,826 for 9 months from U.S. Army Construction Engineering Research Laboratory for "Applications of lcta data to support development of a carrying capacity model on U.S. Army training and testing service."

Jane A. Scherer, Marjorie R. Hamann, and James D. Oliver, cooperative extension: \$325,000 from Illinois Board of Education for "Parent readiness education program for low income single parents and homemakers (PREP)."

Jane A. Scherer and Marjorie R. Hamann, cooperative extension: \$4,000 for 12 months from Illinois Board of Education "Parent readiness education program for low income single parents and homemakers (PREP)."

Shelly J. Schmidt, foods and nutrition: \$2,500 for 7 months from Academy of Applied Science for "Apprenticeship program."

James B. Sinclair, plant pathology: \$111,424 for 25 months from Illinois Soybean Program Operating Board for "Interaction of soybean roots with soilborne pathogens and nonpathogens."

Steven T. Sonka, agricultural economics: \$35,000 for 6 months from National Science Foundation for "Climate prediction, climate change and agriculture."

Joseph W. Stucki, agronomy: \$58,344 for 11 months from USDA for "Influence of soil oxidation state on the behavior of agricultural chemi-

cals," \$37,380 for 12 months from Illinois Department of Agriculture for "Effects of iron oxidation on the fate and behavior of potassium in soil," and \$5,000 for 4 months from Academy of Applied Science for "Apprenticeship program in soil physical chemistry."

William C. Sullivan, horticulture: \$31,500 for 12 months for "Do you see what I see? small experiments in environmental education and training" and \$10,994 for 9 months for "Building bridges: environmental education and corporate America," both from U.S. Environmental Protection Agency.

Laurian J. Unnevehr and Harold D. Guither, agricultural economics: \$15,000 for 12 months from Kellogg Foundation for "Food and agricultural policy in an interdependent world."

John C. van Es, agricultural economics: \$13,500 for 8 months from Coles Together for "Economic development swot analysis and industry targeting."

Lila O. Vodkin and Jack M. Widholm, agronomy: \$84,676 for 24 months from Illinois Soybean Program Operating Board for "Creating of high protein adapted cultivars by genetic engineering."

David J. Wehner and Jean E. Haley, horticulture: \$6,000 for 41 months from National Turfgrass Federation for "1992 national tall fescue test."

Matthew B. Wheeler, animal sciences: \$10,000 for 12 months from Illinois Pork Producers Association for "Genetic markers for reproductive performance of purebred Mieshan and 1/2 Chinese gilts."

Jack M. Widholm, agronomy, and **Donald G. White**, plant pathology: \$126,517 for 24 months from USDA for "Studies to reduce the aflatoxin problem in corn."

Jack M. Widholm, agronomy: \$92,160 for 24 months from Pioneer Hi-Bred International for "A new method for gene transfer in soybean" and \$104,622 for 24 months from American Soybean Association for "Soybean improvement through tissue culture selection."

Henry T. Wilkinson and Wayne L. Pedersen, plant pathology: \$51,700 for 36 months from USDA for "Soil borne diseases of Egyptian maize."

Karen L. Zotz, cooperative extension: \$4,000 for 4 months from Illinois Hunger Coalition for "Volunteer manual."

Ag Campus Construction Update

A series of remodeling projects was being finished as the new academic year began according to Douglas B. Bauling,

Agricultural Experiment Station planning engineer, who oversees remodeling and construction projects for the College of Agriculture.

The most recent construction phase for the National Soybean Research Laboratory nears completion and more scientists have moved in. Dedication was held on September 18.

A tunnel under Gregory Drive between Bevier Hall and the Plant and Animal Biotechnology Laboratory was completed during the summer. The pedestrian passage was part of a larger project that includes the installation of an additional elevator on the south side of Bevier Hall. In addition to the tunnel and elevator, work in Bevier will include new office space on the fifth floor and a new teaching laboratory on the fourth floor.

The tunnel will allow travel between Bevier and PABL without having to go outside or to cross Gregory Drive. Other buildings are also effectively connected to Bevier Hall since there are already connections between PABL and ASL and Turner Hall.

The completion of Phase III of the ASL allowed more animal sciences faculty as well as the departmental offices to move into the building.

The space vacated in Mumford Hall will be occupied by faculty in the Office of Agricultural Communications and Education, the Department of Agricultural Economics, and the Office of International Agriculture. Space in the Stock Pavilion will be returned to campus for assignment. Space in the Animal Genetics Building also has been returned to campus, which is using the area for "overflow" for other campus units displaced by remodeling.

A remodeling project in Turner Hall also should be finished and people moved into new spaces by the end of September. The work includes new agronomy departmental offices on the first floor of the annex and a new seminar room on the first floor.

Other Turner Hall remodeling provided the Department of Horticulture with fourth-floor space that became available when soybean researchers moved to the new National Soybean Research Labora-

tory. Members of the Department of Forestry previously moved into space on the fifth floor.

The next project anticipated for the college will be Phase IV of Animal Science Laboratory. This project is to include remodeling the fourth floor and part of the basement. Bauling says funds for the project are not yet available, and there's uncertainty when there will be enough money to complete the renovation.



Looking down from Bevier Hall, a portion of Gregory Drive is replaced by a gaping hole as workmen build a tunnel between Bevier Hall and the Plant and Animal Biotechnology Laboratory.

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AgriView

**University of
Illinois at
Urbana-
Champaign
College of
Agriculture**

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Agriculture has been consolidating for decades, and we're approaching the day when 85 percent of the nation's food and fiber will come from only 15 percent of our producers. Three-quarters of what we count as farms and ranches are part-time,

providing less than half of their family incomes. Today's successful farmers know the sciences of modern agriculture and are good managers. They've developed financial expertise because modern farming is capital intensive. And they can double or halve their incomes depending on how well they market their products.

We haven't had a food shortage in this country during the lifetime of any living American. Many people don't believe it can happen here. In fact, they believe that our economical food and regular surpluses are a result of land-grant institutions' research programs that now cost them money on the research side and then turn around and cost them money again in farm programs on the produc-

tion side. These people believe that positive research in agriculture will only exacerbate the situation. As a result, we face greater competition for research and technology development funds.

If American agriculture is to continue to remain among the world's most efficient, we need a strong land-grant system. We need to maintain our technological edge, because no matter how large our food surplus appears, it's relatively small and quite fragile in the world perspective.

The technologies that give us tremendous and efficient production and that give us inexpensive, available, and safe food—mechanization, pesticides, and monoculture cropping—also contribute to our surpluses and are being questioned on the environmental front. If we want to maintain our productivity—and we do, and if we want to modify our use of technology—and we do, then we must continue our research programs.

There's no easy answer to what types of research public funds should support. It's clear, however, that as our traditional constituency—farmers—continues to shrink, other groups will place greater demands on the system to address their needs. Our response may require some difficult choices.

The underinvestment in public research is particularly unfortunate because we're in the golden age of biological sciences. Biotechnology and other new research tools have the potential to meet consumer demands for nutrition and safety and still remain cost competitive in an environmentally sensitive manner.

Many of these new technologies will be available in the 1990s. But they'll be

scrutinized unlike any before. Today's public increasingly questions whether technological change is always good or needed. We're hearing concerns about food safety, environmental preservation, and economic and social costs. As a college, we have to respond.

When the university started back in 1869, it had no colleges or departments. But that changed. For example, the farm management unit of animal husbandry was given departmental status in 1918 and was expanded into the Department of Agricultural Economics in 1932. What is now the Department of Food Science was formed in 1947 out of the Department of Dairy Husbandry. The precursor to the School of Human Resources and Family Studies, the Department of Household Science, was established in 1900. The Department of Farm Mechanics came out of the Department of Agronomy in 1921 and became the Department of Agricultural Engineering in 1932. During those years, knowledge was expanding in all phases of agriculture, and the college subdivided as disciplines became more and more specialized and seemingly less related to their cousins.

Now we're now in the process of reorganizing the College of Agriculture into what will be a new College of Agricultural, Consumer, and Environmental Sciences. This doesn't mean that the divisions that occurred in the early part of this century were wrong. On the contrary, they were right for their times. Now, we have to work together and implement a reorganization that's right for our times and addresses the expectations of modern society. ▼

On the cover: Doug Parrett, professor of Animal Science, and Taija Woods, a freshman from Chicago, in the beef metabolism barn on south campus.

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News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: AgriView, Office of the Dean, 101 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801.

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A recommendation for a new structure in the College of Agriculture was approved by a vote of the faculty during the week of December 13, 1993. Of the 275 faculty eligible to vote, 226 cast ballots and approved the recommendation by a vote of 176 yes to 50 no.

During the previous year, faculty groups within the college had examined the college structure and recommended changes. Faculty, administrative, and industry groups responded with their own suggestions.

Dean W.R. Gomes weighed the responses from the various groups and presented the faculty with a reorganization proposal designed to position the college to serve the citizens of the State of Illinois into the 21st century.

"Regardless of the pressures for change from the campus Budget Strategies Committee, the Illinois Board of Higher Education, and others, and regardless of the fiscal realities that force us to make difficult decisions, I am convinced that we need to change to take advantage of the opportunities that will be available to us," Gomes said. "My recommendations are presented in that spirit."

Any changes in the structure of the college probably won't happen for a year or more. The proposal will now move on to the campus senate and then to the chancellor of the Urbana campus, the president of the university, the university Board of Trustees, and ultimately the state Board of Higher Education. ▼

The proposed reorganization includes six basic changes:

- 1 The name of the College of Agriculture would be changed to the College of Agricultural, Consumer, and Environmental Sciences.
- 2 The Mission Statement of the College of Agricultural, Consumer, and Environmental Sciences would be: *To enhance the quality of life in rural and urban environments through systems involving comprehensive teaching, research, and outreach programs involved with food, fiber, consumers, and the environment.*
- 3 The College of Agricultural, Consumer, and Environmental Sciences would contain the following academic units:
 - *Department of Agricultural and Consumer Economics*, which would combine consumer science faculty and the Department of Agricultural Economics (except rural sociology).
 - *Department of Agricultural Engineering*
 - *Department of Animal Sciences*
 - *Department of Crop Sciences*, which would include faculty and staff from the departments of agronomy (except soil scientists) and plant pathology.
 - *Department of Food Science and Human Nutrition*, which would combine faculty in food science and foods and nutrition.
 - *Department of Human and Community Development*, which would comprise programs from the Division of Human Development and Family Studies, rural sociology, agricultural communications, agricultural education, and 4-H and youth programs in the Cooperative Extension Service.
 - *Department of Natural Resources and Environmental Sciences*, which would include soil scientists and faculty from forestry, horticulture, and agricultural entomology.and the following interdepartmental, intercollegiate programs:
 - *Division of Human Ecology*
 - *Division of Nutritional Sciences*
- 4 Structural changes in college administration would result in centralizing services, enhancing development efforts, and streamlining other administrative activities. A revised college administration could include:
 - *The Office of the Dean*
 - *The Office of Academic Programs*
 - *The Office of Extension and Outreach*
 - *The Office of International Agriculture*
 - *The Office of Research*
 - *The Office of Administrative Affairs*
 - *The Office of Development, Alumni Affairs, and Corporate Relations*
- 5 The Office of Budget and Resource Planning would be renamed the Office of Administrative Affairs and the director of the office designated associate to the dean. The expanded office would be responsible for budgeting, planning, human resources, facilities, and service.
- 6 The Office of Resource Development would be renamed the Office of Development, Alumni Affairs, and Corporate Relations; the director of the office would be designated an associate dean.

Recycling newsprint was an early step in moving reusable materials out of landfills and into recycled paper. Newsprint was soon followed by other types of paper as well as by aluminum and other metals, glass, and plastics. Now, researchers in the College of Agriculture are examining another component of the waste stream—vegetable waste—as a candidate for recycling. Home gardeners have been composting garden and kitchen waste for years. And recent legislation prohibiting leaves and grass clippings from being deposited in Illinois landfills had led to commercial-scale yard waste recycling programs. But until now, no one has attacked one of the next largest sources of recyclable/reusable landfill-bound

refuse—food waste from supermarkets and commercial kitchens.

That's changing, however, with the advent of a vegetable-waste composting facility on the College of Agriculture South Farms. **David Williams**, professor of horticulture, is developing a pilot food-waste composting facility on a small commercial scale.

"We're using commercial-sized equipment to find out how such a system would work," Williams explains.

The project is being conducted in cooperation with Illinois Department of Energy and Natural Resources, U.S. Army Construction Engineering Research Laboratory in Champaign, and the Community Recycling Center in Champaign.

Waste products such as vegetable trimmings from restaurants and hospitals along with the trimmings and unsalable produce from supermarkets are putting pressures on landfills. Experts estimate, for example, that the Jewel food stores chain in the Chicago metropolitan area generates from 20 to 30 semi-trailer loads of vegetable food waste every week.

Williams cites the difficulties in siting new landfills as the primary reason behind the project. In addition, there may be future prohibitions against disposing

of food waste in landfills. A successful food-waste recycling system could extend the life of current landfills by diverting food waste to composting.

The composting site on the South Farm has been given an EPA permit, and the facility has been built. Waste collection began on February 7.

"We've invested about \$100,000 in commercial-size composting equipment and about \$50,000 in a concrete pad and for test wells," Williams says. "The technology is usually used for other systems, but we feel it will be suitable for vegetable waste."

The Community Recycling Center is collecting vegetable waste from supermarkets, a hospital, and a restaurant in Champaign-Urbana. CRC is measuring the costs of collecting the waste to evaluate the economics of the entire project.

"The raw material will be 'behind-the-counter' waste," Williams explains. "It won't be contaminated with other foods or paper that can interfere with composting."

Researchers are monitoring the compost site to gather data on such factors as the volume of organic acids produced, temperature, oxygen, and pH for the system. The Illinois EPA could then use these re-

sults to establish benchmarks for monitoring commercial sites in the future.

"We'll be looking at the chemical and physical parameters," Williams says. "And we'll monitor such things as rodents, birds, salmonella, bacteria, and other properties. Then we'll devise the standards."

Because it's wetter than landscape waste that's often composted commercially, vegetable waste will more easily "go anaerobic" and begin to smell. Consequently, the vegetable-waste composting operation necessitates more management than landscape-waste composting. The process also requires of a "bulking agent" to keep the material from becoming too compacted.

"This is a large-scale food-waste project," Williams says. "We're trying to use low-technology composting techniques to prove it can be done and to develop quantitative standards."

"We're using high-straw manure from the College of Veterinary Medicine," he adds. "The vet college produces 20 cubic yards of manure every day, 365 days a year. Using the manure in the composting process diverts it from landfills, too."

The next step will be investigating how to market the finished compost. ▼

LAS dean Faulkner chosen vice-chancellor for academic affairs

In addition to the vegetable-waste project, UI researchers are also studying mixed-waste composting that combines newsprint with landscape waste. Its purpose is to find a way to handle newsprint that can't be recycled because it's been wet or otherwise made unsuitable for conventional recycling.

The investigators are experimenting with different methods of grinding and shredding the newsprint and mixing it with various combinations of landscape waste.

"We're involved with composting education, composting equipment, and composting research," says David Williams, professor of horticulture. "During the past few years, various sources have invested more than one-quarter million dollars to support composting research.

"We've had the technology for a 100 years or more. Now we're applying it to new problems."

Larry R. Faulkner, former dean of the College of Liberal Arts and Sciences at the UI, became vice-chancellor for academic affairs on the Urbana-Champaign campus on January 1, 1994.

He succeeds Robert M. Berdahl, who left January 20, 1993, to assume the presidency at the University of Texas at Austin. Theodore L. Brown, director of the Beckman Institute, served as the interim vice-chancellor from Berdahl's departure through December 31.

Chancellor Michael T. Aiken, who played a role in the selection process, praised Faulkner's appointment.

"I am delighted that Larry Faulkner has agreed to become vice-chancellor for academic affairs," Aiken said when Faulkner's appointment was announced. "He will be, in my judgment, a superb vice-chancellor, and I am looking forward to a close association with him in the years ahead."

Faulkner had been dean of Liberal Arts and Sciences since 1989 and was head of the chemistry department during the five years prior to that.

He earned a bachelor's degree in 1966 from Southern Methodist University and a doctorate in 1969 from the University of Texas at Austin. After three years on the faculty of Harvard University, he joined the UI chemistry department in 1973 and taught for 10 years. He then taught one year at Texas before returning to the UI in 1984 to become a department head.

Faulkner said one obvious challenge will be dealing with continuing constraints on the university's budget. Another will be working with campus administration in order to give the chancellor the freedom to play a significant role in the university's upcoming capital campaign.

Faulkner said he saw his main role as one of supporting the new chancellor and his policies. "I'm impressed with him as a person, and I think we can work well together," he said. ▼



Capstone courses for everyone are on the horizon

Capstone Learning Experience: A course in which students are required to integrate diverse bodies of knowledge to solve a problem or formulate a policy of societal importance. —George W. Sledge, University of Wisconsin

The College of Agriculture Curriculum Revitalization Project is adding a new capstone initiative to the successful freshman discovery project that was introduced as a revitalized Ag/HRFS 100.

A capstone course prepares students to use the sophisticated, specialized knowledge bases they acquire in their majors. These courses encourage students to practice solving complex, interdisciplinary, real-world problems, to work collaboratively to integrate information and solve these problems, and to present their findings in a professional manner.

The college's goal is to integrate the concepts of the introductory freshman discovery program across the curriculum by emphasizing a number of significant themes. These include written and verbal communications, holistic systems approaches, ethics and values, global views, and critical, creative, visual, and alternative thinking. Students would finish their studies by choosing an upper-level capstone course in their major.

"A capstone experience requirement is under consideration for all students in the college," says **William L. George**, associate dean and director of academic programs. "We consider the current courses that offer capstone experiences as leaders in the college. We expect a gradual implementation of capstones throughout the college, curriculum by curriculum."

During the past year, George's office surveyed the academic units in the college and identified more than 30 courses that could be categorized as capstone or capstonelike experiences. Capstone courses in the college include a variety of formats, including guided research, product design, and case studies, as the following examples show.

Animal Sciences

Douglas Parrett, associate professor in the Department of Animal Sciences, teaches "Beef Production," a capstone course. "Animal production courses fit the capstone goals of looking at a whole enterprise," Parrett says. "We look at enterprise management with science-based information."

The department's animal production courses build on the various disciplines' prerequisites—reproduction, nutrition, genetics, and management.

As it evolved into a capstone experience, Parrett's course changed dramatically from a lecture-problem-test regimen to group problem solving that includes discussions of social and economic considerations. Students work together and use what they've learned in earlier classes to address complex management issues.

"We've added more management decision making, more economics versus just technical information," Parrett explains. "We're spending more time on social issues versus technical and scientific facts. We're talking about animal welfare, food quality and safety, marketing. We're not talking just about technology but more about how it affects society."

"Most students are enthusiastic," he adds. "There are more questions. Their problem-solving skills are enhanced; their critical thinking skills are enhanced. Listening goes up when students make presentations. Class interest is higher. Learning is better."

Agricultural Engineering

Richard Coddington, associate professor in the Department of Agricultural Engineering, has been teaching "Engineering Design Projects for Agricultural

Industries" each spring for nine years. Supported by John Deere Harvester Works, the course allows teams of four students to choose design projects from a selection of 10 to 20 that are provided by Deere.

"We want an experience that's as meaningful and real-life as possible," Coddington explains. "We want to go beyond paper design by building and testing prototypes and running tests."

"Design can have more than one right answer," he adds. "The emphasis is strongly placed on good communications skills."

Each team gives a final oral presentation at the corporate site and turns over a final report in typical industry format to Deere management. The company has used the results of nearly half of the class projects over the years.

"The course is the glue that ties together all the engineering disciplines and principles the students have studied," Coddington says. "Students have to work really hard, but the rewards are higher: the satisfaction of a completed project, the experience of corporate interface, and the excitement of working on a real-world project. We focus on the skills and experience companies are looking for."

Foods and Nutrition

Shelly Schmidt, associate professor of food chemistry and chair of the Division of Foods and Nutrition, teaches "Experimental Foods." It's both a capstone course and an approved Comp II course.

Comp II denotes a second writing-intensive course that is required for graduation for all students who started at the UI in the fall of 1991 or after. It requires writing in a variety of styles dispersed throughout the course.

Group projects are emphasized in many capstone courses to encourage communications, leadership, and problem-solving skills. Sara Douglas (standing) assigns topics and readings to small groups, which then present the information to the rest of the class.

In her course Schmidt teaches the process of research. The first half of the course includes seven laboratory exercises to review procedures and learn new methods. Each requires a written report. Students also design and prepare their own research projects for the second half of the term.

"After they graduate, most of these students will be responsible for their own research," Schmidt says. "This is a little taste of what that's like."

Schmidt explains that Comp II contributed two significant changes to the way she teaches the class. "The first is: Not grading the first draft of a paper gives the students an opportunity to improve their work," she says. "The second is interaction and the team concept. My job is to be accessible and give them the tools they need to be successful. I'm the coach."

"My philosophy is that everything we do in life is research," Schmidt adds. "We gather information and make decisions. Research is not just a lab experience."

Consumer Sciences

Sara Douglas, associate professor of textile marketing in the Division of Consumer Sciences, teaches "Macro Environment of Textile and Apparel Businesses." The course uses case studies along with role playing and group projects to examine current topics in the textile and apparel business.

"Most of the students have a business concentration and have taken courses such as marketing, law, and promotion," Douglas explains.



"They bring a variety of different perspectives to the class and to their groups."

Although the text covers social issues and public policy in general, for each topic Douglas has students examine how the political, economic, and social forces affect the textile industry. She introduces each topic with a lecture/discussion session and follows with participation days that may include role plays, case studies, or panel discussions.

A semester project—a major case study—completes the term.

"The semester project is prepared in pieces and goes through refinements much like a thesis," Douglas explains. "Students develop good communications skills." ▼

Capstone learning experiences/ courses for upper-level undergraduates

All capstone courses share a number of *central attributes* that together serve to define the capstone experience. These attributes are

- An integrative and interdisciplinary learning experience
- A focus on real-world situations and systems
- Provisions for a collaborative learning experience
- Emphasis on communications, leadership, and problem-solving skills

Scientists estimate that an assortment of trees and bushes called actinorhizal plants may be as important as legumes in adding nitrogen to natural ecosystems. Research in the College of Agriculture on these nitrogen-fixing plants may have far-reaching effects for societies around the world. One special attribute of actinorhizal plants is their ability to form root nodules in symbiosis with the nitrogen-fixing soil bacterium Frankia. These nodules allow the plants to flourish in N-deficient soils and to improve soil nitrogen fertility. The bacteria in the nodules fix nitrogen by taking inert nitrogen from the air and changing it into a form that plants can use.

"Actinorhizal plants are trees and shrubs that manufacture usable nitrogen in similar ways to soybeans and clover, although they're different host plants and different microbes," says **Jeffrey O. Dawson**, professor of forest biology in the Department of Forestry.

A management tool in Illinois

Dawson explains that actinorhizal autumn olive and European black alder trees can be economically important as nitrogen sources in the Midwest. Black alder have been used in Illinois in reclaiming mine spoils and as "nurse crops" with black walnut trees.

For more than 25 years, researchers have been investigating how actinorhizal trees can improve production in Illinois woodlands.

Back in 1969, the USDA Forest Service's North Central Forest Experiment Station interplanted black walnut trees in Alexander County in southern Illinois with actinorhizal European black alder and autumn olive trees. UI scientists together with Forest Service scientists have been evaluating the results of the trials.

"Interplanting eastern black walnut with nitrogen-fixing trees provides landowners with a low-cost, low-maintenance alternative that may be more profitable

than more-intensive management practices," Dawson says.

International significance

Most actinorhizal plants are small trees or shrubs that grow in temperate regions or high-altitude zones in the tropics. They can be found primarily on soils low in available nitrogen in forests, swamps, prairies, and deserts and along riverbanks. "They're a little-understood group of plants, the potential of which has not been exploited," Dawson says.

Although most have little commercial importance, actinorhizal plants could produce benefits with improved management, cultivation, and domestication. They have proved to be valuable in forestry and agricultural applications, especially in developing countries, where they can be used for stabilizing soils, increasing soil fertility, producing wood, fiber, and forage, and improving growth of associated timber, food, and forage crops.

Dawson says actinorhizal trees can serve as an important component of many agricultural systems.

"They thrive in poor soils," he explains. "They improve soils for associated plants, both food and wood crops. And they have a nurse-crop or co-crop ability. For example, in South America and

Papua-New Guinea they're used to provide shade and nitrogen for coffee crops."

Leaves from these plants are also high in nitrogen, and because they compost rapidly, the process could be increased in efficiency and the compost could be used as a source of nitrogen.

Casuarina trees from Australia

Dawson had been working with actinorhizal trees when he went to Australia on sabbatical in 1985. While he was there he "discovered" casuarina, often called "Australian pine," even though it's not a pine.

Indigenous to Australia, southeast Asia, and the South Pacific, casuarina trees are very dense, and the wood produces little ash, placing them among the best fuel-wood trees in the world. Because they're salt tolerant, they're often used to stabilize beaches and dunes and provide shelter from the wind along oceans.

These trees have been introduced in tropical and warm, temperate areas around the world. In Argentina and Australia they're used to stabilize stream banks. In southeast China they're used as windbreaks. And in India, where the British originally planted them as fuel wood for steam locomotives, landowners may still plant a few hectares of

casuarina when a daughter is born to finance a dowry through the sale of its valuable posts and fuel wood when she's ready to marry.

Because several casuarina species are tolerant of both salinity and drought, scientists believe they can be valuable sources of fuel and wood in dry areas with poor, saline soils. The drawback is that many soils do not support indigenous *Frankia* capable of nodulating actinorhizal plants. In an effort to overcome this barrier, UI scientists are studying *Frankia* strains that may be suitable for use as inocula.

Inoculants from the UI

"We're interested in the symbiosis—the means by which *Frankia* cooperates with the trees," Dawson explains.

Although actinorhizal plants can grow without the benefit of this symbiotic relationship with *Frankia*, seedlings often perform poorly. Plants may become stunted or even die on infertile soils without available nitrogen.

The focus of much current research is on methods to inoculate trees

with *Frankia* when they're introduced to new areas in order to get the trees growing and fixing N. Scientists want newly introduced trees to be efficient and effective and survive in N-poor soils.

Where casuarina are indigenous, soils are often dry for long periods of time, yet the bacteria are somehow able to survive. UI researchers are investigating this phenomenon to determine how *Frankia* withstands drought and to develop ways to dry and ship the bacterium to use as an inoculant. A Ph.D. student, Steven Burleigh, is researching how the microbe withstands and can be induced to withstand drying.

"We're growing casuarina in the greenhouse for inoculation studies and drying spores and drought-tolerant hyphae of *Frankia*," Dawson says. "It's more easily done here than in unequipped or underequipped countries."

"We get inquiries and visits from people from around the world to learn more about *Frankia*," he adds. "We're doing basic biological research that has applications almost anywhere." ▼

Local Chinese forestry workers are pictured in a young casuarina windbreak on coastal sand dunes in Fujian province, PRC.

Extensive windbreaks shelter coastal villages from wind and prevent encroachment of sand dunes onto farmland.

Casuarinas are also used here in traditional windbreaks around farms, where the wood and litter are harvested for fuel. Casuarinas are not native to China, but this Australian import has been widely planted in southeastern China.



Open House draws crowds despite snow

The 1994 College of Agriculture Open House, "Get Down to Earth," was just getting started on Friday, February 25,

when falling snow followed by blowing snow kept some potential visitors at home. But bad weather didn't keep away

school busses that were on the road

before the snow started and delivered high school students from as far away as Chicago and Mt. Vernon.

Friday's loss was Saturday's gain, however, as clear skies and diminished winds brought the Open House the best-ever single-day attendance on February 26. Total visitors for the two-day event was estimated at 17,000.

The Open House featured more than 130 displays in 10 buildings with at least 700 faculty, staff, and students participating. The planning committee was co-chaired by **Sandra Casserly**, Office of Agricultural Communications and Education, and **Roger Courson**, Vocational Agriculture Service.

One of the most popular exhibits was the Terrestrial Time Tunnel, which focused on the changes which have taken place in the central Illinois landscape since the time of settlement and then presented a vision of what this same landscape might look like in the future. Sponsored by the Department of Forestry and the Illinois Natural History Survey, the display drew an estimated 10,000 visitors.

The Cooperative Extension Service combined with the Department of Agricultural Engineering to show how

CES lent a hand in fighting the floods of '93. Visitors could participate by picking up a mini sandbag from the CES display in the Stock Pavilion and taking it to the Agricultural Engineering Sciences Building to learn how to redirect water flow by creating miniature sandbag levees.

Other popular exhibits included Jurassic Pork, Cottage Gardening and Illinois's Backyard, Farm Animals, and Earthworms and Agriculture. Smokey Bear, Zelda the Zebra Mussel, and Woodsy Owl also were on hand to talk with kids of all ages.

Students were an important part of the program as 45 individual students and groups entered display competition. Students in Wayne Banwart's Soils 303 class were given the assignment to attend the Open House, comment on what they saw, and propose suggestions for improving the event in future years. ▼

Student Competition Results

College of Agriculture 1994 Open House

Undergraduate Student (1 or 2 persons)

- 1st Jason Carlson and Steve Campbell, Agricultural Engineering
"Ceramic Sickle Bar Knives"
- 2nd Eman Jassim, Animal Sciences
"Goats, Goats, and More Goats"

Undergraduate Student (3 or more persons)

- 1st Paul Taylor, Joe Frazee, and Julie Madison, Agricultural Engineering
"Controlling the Flood"
- 2nd Illini Foresters Club
"Happy Trails to You—Trail Etiquette"

Graduate Student

- 1st Bryan Shaw, Agricultural Engineering
"Convective Emission Chamber for Aerosol Studies"
- 2nd Will Gates, Agronomy
"Soil Colors Are Down to Earth"

Open House for 1995 is scheduled for March 3 and 4



Open House visitors Xavier Pope (left) and R. Carson, seniors at Whitney M. Young High School in Chicago, add sandbags to a model of a levee as Joe Frazee, ag engineering senior (kneeling at right) explains how sandbagging the levees protected some areas from flooding last summer.

Three College of Agriculture faculty members were named University Scholars for 1993.

Janice M. Bahr, professor of animal sciences, is recognized as one of the world's leading avian reproductive physiologists. She is a pioneer in research elucidating the regulation of the chicken ovary and egg production. Bahr has identified the use of a hormone that improves egg production and enhances humane treatment of chickens. Her leadership in isolating the hormones that control egg production and preparing chemicals to measure these hormones has greatly advanced basic endocrine research in poultry throughout the world.

Peter J. Barry, professor of agricultural economics, is the leading contemporary scholar of agricultural finance in the world. He has advanced the frontiers of theoretical and applied agricultural finance, guided U.S. and Illinois farm credit policy, and aided the agricultural lending industry. Many of his students are leaders in agricultural banking, the Farm Credit System, and the academic community. His book *Financial Management in Agriculture* is in its fifth edition and remains the standard college text.

Harris A. Lewin, associate professor of animal sciences, has established a world-recognized research program in finding genes that influence disease resistance and production traits in cattle. Ultimately, his work should lead to farmers becoming less dependent on costly and potentially harmful animal antibiotics, through the breeding of genetically elite animals and the development of improved vaccines. Three patent disclosures have been filed based on his work. Lewin also is a strong and well-received teacher.

Jonathan M. Norvell, Department of Agricultural Economics, received the Accredited Farm Manager designation from the Ameri-



College of Agriculture faculty members Janice M. Bahr, Peter J. Barry, and Harris A. Lewin were named University Scholars for 1993.

can Society of Farm Managers and Rural Appraisers in November. He is assistant manager of university trust farms.

Margaret R. Grossman, Department of Agricultural Economics, received the distinguished service award from the American Agricultural Law Association. The award is the association's highest and recognizes distinguished contributions to agricultural law.

Darrell A. Miller, Department of Agronomy, received one of two North Central Region awards for excellence in college and university teaching in food and agricultural sciences. The award was presented at the annual meeting of the National Association of State Universities and Land Grant Colleges in Washington, D.C., in November.

Joseph W. Stucki, Department of Agronomy, was elected a Fellow of the Soil Science Society of America.

Kenneth R. Olson, Department of Agronomy, was appointed associate editor of the Soil Science Society of America Journal.

The Illinois Cooperative Extension Service presented individual awards

for sustained excellence to **Delbert T. Dahl**, extension specialist, marketing and communication program support, **Ronald E. Cornwell**, extension educator, ornamental horticulture in the Edwardsville Extension Center, and **James G. McCurdy**, unit leader in the Warren-Henderson Extension Unit.

Individual awards for outstanding or innovative programs were presented to five individuals by the Cooperative Extension Service during the CES annual conference.

Bill Harryman, extension educator, farm business/farm management and marketing in the Decatur Extension Center, was recognized for developing on a program dealing with farm leasing.

Michelle Pride, extension educator, community leadership and volunteerism in the Decatur Extension Center, was cited for a series of workshops to help educate minority contractors who were not bidding on federally funded housing rehabilitation projects.

Lois E. Smith, extension educator, consumer and family economics in the Edwardsville Extension Center, was acknowledged for developing and implementing the Life Management Skills workshop for the St. Clair County Housing Authority's Operation Bootstrap.

Ken Koelkebeck, assistant professor

and extension specialist, poultry, in the Department of Animal Sciences, was recognized for conducting educational programs through the Multi-State Poultry Extension Group and for conducting the annual Illinois Poultry Industry Council Seminar.

Stuart D. Hawbaker, unit leader for the Macon County Extension Unit, was cited for leading the formation of the Decatur/Macon County Water Quality Program.

Two teams of Cooperative Extension personnel were recognized for outstanding or innovative programs by the Cooperative Extension Service during extension's annual conference.

The team of **Beatrice Bagby**, regional director of region V; **Joan Blaser**, extension educator, family life in the Quad Cities Extension Center; **Karen Chapman**, extension specialist, Division of Foods and Nutrition; **Amy Griswold**, extension educator, consumer and family economics in the Macomb Extension Center; and **Ann Marie Marshall**, extension educator, family life in the DeKalb Extension Center, was cited for working with other groups to develop an Illinois version of the National Senior Series Project.

The team of **Vernon Bryant**, unit educator, special projects in region III; **Chris Eller**, unit assistant, community leadership and volunteerism in the Cook/Chi-

cago-North Extension Unit; **Greg Stack**, extension educator, horticulture in the Countryside Extension Center; **Larry Wilson**, extension educator, community leadership and volunteerism in the West Rogers Park Extension Center; and **Ron Wolford**, extension educator, urban gardening in the Cook/Chicago-South Extension Unit, was recognized for developing a Master Gardener Program in the city of Chicago.

Cheryl L. Bielema, Office of Agricultural Communications and Education, received a NAEHE Fellowship and Continued Excellence Award at a meeting of the National Association of Extension Home Economists in Phoenix, Arizona.

John W. Erdman Jr., Department of Food Science, has been selected as the 1994 winner of the American Institute of Nutrition Borden Award for distinguished research. The award was presented on April 26 in Anaheim, California.

Neil F. Shay, Department of Food Science, has been selected to receive a 1994 Future Leader Award from the International Life Sciences Institute-Nutrition Foundation. Future leaders are chosen primarily on their promise as leaders in the field of nutrition.



Bode named head of Agricultural Engineering

Loren E. Bode was named head of the Department of Agricultural Engineering by the UI Board of Trustees at its meeting March 11 in Chicago.

Bode had been acting head of the department since August 1993. He replaces Roscoe Pershing, who moved to the position of associate dean in the College of Engineering.

Bode joined the UI faculty in 1973 and has had split responsibilities in extension and research in the area of agricultural chemical application equipment. He was named associate head of the Department of Agricultural Engineering in 1986.

Before joining the UI, Bode conducted research on pesticide application equipment for the USDA at Columbia, Missouri, and Stoneville, Mississippi.

Raised on a farm near Hannibal, Missouri, Bode received his bachelor's, master's, and Ph.D. degrees in agricultural engineering from the University of Missouri-Columbia.

He is a registered professional engineer, a fellow in the American Society of Agricultural Engineers, and an active member of a number of professional and agricultural societies.

Bode received a College of Agriculture Paul A. Funk Recognition Award in 1993.



Robert Frazee (left), a natural resource management educator at the East Peoria Extension Center, CES, received a superior service award from Secretary of Agriculture Mike Espy in Washington, D.C., in September. Frazee was recognized for his work to stop streambank erosion and sedimentation in the Illinois River System.

Research programs in the College of Agriculture are enhanced considerably by gifts and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the college, including the following:

Jerry W. Robinson and **Julie Fesenmaier**, agricultural economics: \$100,000 for 12 months from Illinois Board of Higher Education for "Helping rural communities prepare for economic development."

Jesse C. Thompson, academic programs, and **Otis G. Williams**, minority student affairs: \$70,000 for 12 months from Illinois Board of Higher Education for "Illinois minority science internship program."

George C. Fahey, animal sciences: \$11,700 for 12 months from E.I. DuPont De Nemours for "Sample Analyses."

Walter L. Hurley, animal sciences: \$18,000 for 8 months from National Pork Producers Council for "Porcine mammary epithelial cell culture."

Keith W. Kelley, animal sciences: \$253,016 for 12 months from U.S. Public Health Service for "Hormonal restoration of a functional thymus during aging."

Harris A. Lewin, animal sciences: \$124,076 for 12 months from USDA for "Towards a 20-cm map of the bovine genome."

Roderick I. Mackie and **Bryan A. White**, animal sciences: \$133,116 for 24 months from USDA for "Biochemistry and genetics of enzymes of ammonia assimilation in ruminococcus."

Yvonne A. Horton, cooperative extension: \$10,000 for 5 months from Illinois Department of Children and Family Services for "4-H after-school program."

John W. Erdman, food science, and **Neal R. Merchen**, animal sciences: \$160,000 for 24 months from USDA for "Carotenoid absorption and metabolism."

Christine M. Todd, human development and family studies: \$22,299 for 9 months from Illinois Department of Children and Family Services for "Child care instructional materials."

Wilmot B. Wijeratne and **John J. Nicholaides III**, international agriculture: \$330,000 for 12 months from US Agency for International Development for "Post-harvest collaborative agribusiness support program."

Toshiro Nishida and **Hiro I. Nishida**, food science: \$187,898 for 12 months from U.S. Public Health Service for "Role of plasma lipoproteins in atherosclerosis."

Peter J. Barry and **Bruce J. Sherrick**, agricultural economics: \$33,000 for 9 months from Farm Credit Administration for "Stress study of agricultural real estate loans."

Robert H. Hornbaker, agricultural economics: \$1,000 for 12 months from Ohio State University for "Pesticide use and economic viability of crop production enterprises in the corn belt."

Michael E. Irwin and **Scott A. Isard**, agricultural entomology: \$19,502 for 9 months from USDA for "Russian wheat aphid dispersal dynamics."

Torbert R. Rocheford, agronomy, and **Donald G. White**, plant pathology: \$89,427 for 12 months from USDA for "Identification of molecular markers associated with genes for preharvest resistance in corn to aspergillus flavus and aflatoxin. . ."

F. William Simmons, agronomy: \$24,974 from U.S. Army for "Hydrologic and waste-treatment characteristics of vegetated sand filter systems."

Joseph W. Stucki, agronomy: \$198,000 for 36 months from USDA for "Surface chemistry of oxidized and reduced phyllosilicates."

Michael Ellis and **Robert A. Easter**, animal sciences: \$20,000 for 12 months from Abbott Labs Inc. for "Effect of erythromycin thiocyan-

ate on the growth performance and carcass characteristics of growing finishing swine."

Harris W. Lewin, animal sciences: \$5,000 from USDA for "International conference on comparative gene mapping."

Sidney L. Spahr, **Michael R. Murphy**, and **Jan E. Novakofski**, animal sciences: \$137,530 for 36 months from Binational Agricultural Research Development for "Ultrasound body condition measurements for automated dairy management systems."

Karen R. Gert, **Mary A. Fugate**, and **Jimmy L. Shonkwiler**, cooperative extension: \$3,000 for 12 months from U.S. Department of Housing and Urban Development for "Money management for families."

Ronald C. Wolford, cooperative extension: \$1,700 for 7 months from Chicago Community Trust for "Uptown community garden."

Sandra L. Brown, forestry: \$96,647 for 12 months from U.S. Department of Energy for "Spatial and temporal patterns of biotic exchanges of CO₂ between the atmosphere and tropical landscapes and. . ."

David J. Wehner and **Jean E. Haley**, horticulture: \$6,000 for 41 months from National Turfgrass Federation for "1993 national bentgrass test."

Christine M. Todd, human development and family studies: \$2,420 for 2 months from Illinois Department of Children and Family Services for "Illinois child care newsletters."

Donald K. Layman, human resources and family studies: \$177,660 for 12 months from Illinois Department of Children and Family Services for "Child care resource service."

David L. Chicoine, agricultural economics: \$7,800 for 12 months from the state of Illinois for "1995 farmland assessment data."

Robert J. Hauser, agricultural economics: \$33,000 for 16 months from USDA for "Assessing the relationship between barge and rail rates for U.S. grain."

David A. Lins, agricultural economics: \$56,940 for 36 months from U.S. Information Agency for "Privatizing farms and agribusiness firms in the former Soviet Union: the case of Kazakhstan."

Leslie L. Christianson and Gerald L. Riskowski, agricultural engineering: \$70,143 for 18 months for "Minimum-ventilation air-flow rates with vav systems."

Steven R. Eckhoff, agricultural engineering: \$22,500 for 12 months from A.E. Staley Manufacturing Co. for "Technical testing."

Steven R. Eckhoff, agricultural engineering: \$22,500 for 12 months from E.I. DuPont De Nemours for "Technical testing."

Gerald L. Riskowski, Ronaldo Maghirang, and Ted L. Funk, agricultural engineering: \$30,874 for 12 months from American Society of Heating, Refrigeration and Air-Conditioning Engineers for "Environmental quality in animal housing facilities."

Michael E. Irwin, agricultural entomology: \$67,290 for 15 months from USDA for "International Arid Lands Consortium restoration ecology workshop."

Robert J. Lambert, agronomy: \$30,519 for 12 months from Pioneer Hi-Bred International for "Evaluation of the corn synthetic pool a of Pioneer Hi-Bred for nitrogen-use efficiency and mass selection of pool b. . ."

Earl B. Patterson, agronomy: \$50,000 for 12 months and \$54,000 for 57 months from USDA for "Maize genetics stocks evaluation and computerization."

Jack M. Widholm and Torbert R. Rocheford, agronomy: \$75,000 for 12 months from USDA for "Gene identification and manipulation of the anther culture response of maize."

Floyd K. McKeith, animal sciences: \$30,147 for 12 months from Eli Lilly & Co. for "Effect of feeding ractopamine on the organoleptic proper-

ties of fresh pork loin roasts and cured semimembranous. . ."

Peter D. Bloome and Jimmy L. Shonkwiler, cooperative extension: \$98,605 for 12 months from Illinois Department of Energy and Natural Resources for "Agricultural energy information and education program."

Robert D. Espeseth and Peter D. Bloome, cooperative extension: \$420,978 for 12 months for "Illinois/Indiana Sea Grant program" and \$78,900 for 12 months for "Illinois Indiana Sea Grant program zebra mussel mass outreach program," both from National Oceanic and Atmospheric Administration.

Hans P. Blaschek, food science, and **Roderick I. Mackie and Bryan A. White**, animal sciences: \$106,088 for 12 months from U.S. Department of Energy for "Genetics of solvent-producing clostridia."

Frantzie Balmir and Susan M. Potter, foods and nutrition: \$18,903 for 12 months from U.S. Public Health Service for "Influences of dietary protein sources on plasma lipids, apolipoproteins, and hormones."

Gary L. Rolfe, forestry: \$82,608 for 12 months for "Illinois Council on Forestry Development liaison activities" and \$10,000 for 12 months for "Illinois Council on Forestry Development support," both from Illinois Department of Conservation.

David J. Williams, horticulture: \$18,976 for 24 months from U.S. Army Construction Engineering Research Laboratory for "Food-waste processing pilot facility."

Wilmot B. Wijeratne and Karl E. Weingartner, international agriculture: \$301,100 for 42 months from U.S. Agency for International Development for "A Black Sea model for privatized postharvest grain systems in the newly independent states."

Stephen K. Farrand, plant pathology: \$130,000 for 24 months from USDA for "CIS and trans acting functions mediating ti plasmid transfer."

Jerald K. Pataky, plant pathology: \$11,800 for 12 months from Midwest Food Processors Association

for "Improving disease resistance in sweet corn."

Peter J. Barry, agricultural economics: \$94,416 for 12 months from USDA for "Center for farm and rural business finance."

Leslie L. Christianson, Gerald L. Riskowski, and Steven E. Ford, agricultural engineering: \$17,500 for 12 months from National Pork Producers Council for "Effects of pen partitions and feeders on air velocities and air quality."

Robert A. Easter, animal sciences: \$17,900 for 12 months from National Pork Producers Council for "The effects of starter feeding program on growth and body composition changes from weaning to market weight" and \$14,000 for 11 months from E.I. DuPont De Nemours for "Establishment of the digestible and metabolizable energy values for various corn types."

William E. Artz, food science: \$73,079 for 23 months from Arco Chemical Co. for "Analysis of mixtures of heated f.a. esterified propoxylated glycerol and tgs."

William E. Artz and Larson B. Dunn, food science: \$59,160 for 11 months from Arco Chemical Co. for "Analysis of heated proprietary mixtures of fa eggs and tgs."

Michael A. Mazzocco and Steven T. Sonka, agricultural economics, and **Frederick W. Winter**, business administration: \$71,950 for 12 months from USDA for "Providing a foundation for agribusiness management education."

Steven R. Eckhoff, agricultural engineering: \$232,228 for 24 months from Illinois Corn Marketing Board for "Hybrid milling technology for increasing co-product value and decreasing cost of ethanol production."

Michael E. Irwin and Scott A. Isard, agricultural entomology: \$10,545 for 12 months from USDA for "Russian wheat aphid dispersal."

Benjamin A. Jones, experiment station: \$118,020 for 12 months from USDA for "Rural environmental research, Illinois."

Robert G. Darmody, agronomy: \$50,029 for 12 months from Illinois

Clean Coal Institute for "Plant response to fbc waste coal slurry solid mixtures."

Theodore Hymowitz, agronomy: \$12,040 for 7 months from USDA for "Plant exploration in western Australia to collect wild perennial glycine germplasm for crop improvement."

Cecil D. Nickell, agronomy: \$352,433 for 36 months from Illinois Soybean Program Operating Board for "Soybean breeding and genetics."

Terrance L. Smith, food science: \$20,111 for 12 months from American Heart Association for "LDL metabolism in vitro under magnesium deficiency."

David J. Wehner and Jean E. Haley, horticulture: \$6,000 for 42 months from National Turfgrass Federation for "1993 national bentgrass (fairway/tee) test."

David J. Wehner and Thomas B. Voigt, horticulture: \$6,000 for 42 months from National Turfgrass Federation for "1993 national fineleaf fescue test."

J. Bruce Litchfield, agricultural engineering, and **Shelly J. Schmidt**, foods and nutrition: \$164,000 for 24 months from USDA for "Measurement of physical properties of agricultural materials by MRI."

Peter D. Bloome, cooperative extension, and **Loren E. Bode**, agricultural engineering: \$214,999 for 12 months from Illinois Department of Agriculture for "Pesticide applicator training 1993-94."

Rafael Jiménez-Flores, food science: \$48,002 for 24 months from National Dairy Council for "Synthesis, isolation, and characterization of mono and di glycerides from butter fat."

Mark B. David, forestry: \$14,312 for 12 months from USDA for "Increasing soil temperature in a northern hardwood forest: effects on elemental dynamics and primary productivity."

Roger L. Courson, vocational agriculture: \$4,756 for 8 months from Illinois Board of Education for "District IV agricultural education field advisor support."

Research notes from the Experiment Station

Research Notes explores the research behind just a few of the hundreds of projects under way in the College of Agriculture.

Better gains with less pollution

In tests, swine and poultry performed better on a new diet that had lower levels of nutritional components compared to the standard diet strategy used around the world. The Illinois Ideal Protein Diet defines the requirement for lysine, an essential amino acid often short in diets, and then lists all other amino acid requirements as a percentage of lysine.

Because it has lower levels of nutritional components, the Illinois Ideal Protein Diet can lead to more efficient gains, which translates to cheaper meat. In addition, research shows animals on the new diet produce less nitrogen, phosphorus and other pollution in excreta. Although aimed at swine and poultry, the ideal protein ratio may have applications for pet and human nutrition as well. —*David Baker, Department of Animal Sciences*

Getting the big picture

When a UI landscape development researcher says "picture this," he turns to a computer screen. A system using digital cameras and innovative computer software is allowing researchers to put a picture on the screen and then change it as new ideas for land use are proposed. That makes "building" a high-rise in the middle of a cornfield a matter of taking a picture of a building and manipulating it into a farm landscape scene.

Researchers are using the new tool to gather information more accurately on how people react to changes in land use. Because computer landscaping programs incorporate technical knowledge, the tool also has potential for making it easier for citizens to become more involved in the development of public spaces. —*William Sullivan, Department of Horticulture*

Researchers tackle microorganisms

UI researchers are using genetic techniques to make mutations of microorganisms that produce toxins responsible for such problems as gangrene and food poisoning. These microorganisms, the third most

prevalent food poisoning organisms in the world, are found in almost every environment.

By looking at individual mutants, researchers hope to better understand genetic control of virulence. That could help them eventually develop ways to control and prevent disease from occurring. —*Hans Blaschek, Department of Food Science*

Berries with heart

Researchers are studying the wild blueberry and bilberry, lingonberry, and cranberry to find a basis for the belief that the berries have cardioprotection and anti-tumor properties. Their goal is to reproduce the phytochemicals in tissue cultures and then find ways to change the phytochemical content in cells.

If the phytochemicals prove to have health benefits and tissue culture strategies are successful, one possible result from the research might be pharmaceutical production of extracts with the health-promoting phytochemicals. —*Mary Ann Smith, Department of Horticulture*

How much is enough?

Scientists are identifying and quantifying phytochemicals in such plants as onions, blackberries, and strawberries. Eventually, this research will involve human-health researchers for assessment of different levels of phytochemicals for cancer chemoprevention. —*Robert Skirvin, Department of Horticulture*

Toxin may provide protection

Cyanohydroxybutene (CHB), which is found in such cruciferous vegetables as cabbage and Brussels sprouts, is toxic at very high levels to cells in the pancreas and liver. But UI researchers are studying that toxicity to find out if it could actually be used to protect against pancreatic cancer. Preliminary data using low levels of CHB show cancer cells are more susceptible to toxicity from CHB than are normal cells.

If CHB proves to provide significant chemoprotection against cancer, a possible future step might be for geneticists to increase CHB in vegetables. —*Elizabeth Jeffery and Matthew Wallig, Division of Nutritional Sciences*

UI Has Lead in Arid Lands Program

Water is a precious commodity. In some parts of the world, competition for water resources is keen as people, agriculture, and a variety of industries vie for their share. As a member of the International Arid Lands Consortium (IALC), the UI is one of a select group of institutions chosen to participate in an international program to address problems related to managing arid lands. IALC was formed in 1990 to coordinate interdisciplinary research and its application to

managing fragile landscapes and their

impact on food production and soil and water conservation. Authorized by Congress in the 1990 Farm Bill and funded through U.S. Forest Service and Cooperative State Research Service grants, IALC supports peer-reviewed research projects in the U.S. and Israel.

IALC is working to coordinate research collaboration between the member institutions, to establish demonstration projects, and to develop methods to apply the results to the unique problems of arid and semi-arid regions of the world. Last year, the research advisory committee awarded seven grants of about \$30,000 each to support existing work in the targeted areas. A second round of funding will be announced this spring following review of proposals submitted last fall.

Michael Irwin, professor in the Office of Agricultural Entomology, was chair of the IALC Research Advisory Committee for its first two years. "The funding process encourages collaboration between U.S. and Israeli researchers," Irwin says. "The focus is on nontraditional approaches to water management, re-forestation, and marginal rather than intensive agriculture."

The UI is also the lead institution in developing and organizing a workshop designed to uncover gaps in knowledge in arid lands research. The goal is to be able to target future research efforts in directions that will be most important to developing strategies for the sustainable development of arid lands.

"The workshop is intended to pull together the world's knowledge on arid lands and help identify where resources should be invested," Irwin says. "We

want to engender new relationships and interactions between disciplines. It will be a landmark in the concept of arid lands and arid lands management."

The workshop will be conducted in Israel in June with most of the participants from Israel, the U.S., and Australia—areas of the world where much of the research about arid lands has been and is being done.

"The point is to talk about what is known in general and put it all together in a systems context," Irwin explains. "We want to establish a benchmark of the current state of knowledge."

The next effort along these lines, he adds, will probably look at social and cultural implications of arid lands management. ▼

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As the public share of university and college budgets continues to shrink, private funds become more and more important to maintain our competitive edge. For years, the College of Agriculture has augmented its public budget with private gifts, grants, and contracts. These funds have made the difference between our being a very good institution

and a truly great institution. Support from private individuals is especially important as we work to enhance the educational experiences we offer our students. During the past two fiscal years, the college has received more than \$15 million in private support.

These funds keep our research programs among the leaders in the world and allow us to provide more than \$325,000 in undergraduate merit scholarship assistance and nearly \$350,000 in graduate fellowships.

The campus and the university as a whole are depending more and more on similar sources of funds. In fact, we have become less a public institution and more a public-assisted university as

state financial support slips to an ever smaller proportion of the university budget.

A few years ago campus leaders reviewed our condition and decided that if we were indeed becoming a public-assisted university, then we needed to increase the private assistance we require to maintain our leadership. This, then, was the genesis of the \$1 billion capital campaign now underway at the University of Illinois.

For the College of Agriculture, our share amounts to \$75 million. It's important for us to remember three things about that \$75 million figure.

1. It represents contributions over an eight-year period from 1991 through 1998.
2. It includes all the contributions the college receives during that period, not only new funds.
3. The new College of Agriculture Information and Alumni Center is included in that figure, and we've already received nearly \$6 million in cash and pledges.

For the past three years the college and the university have been operating in what is called the quiet phase of the fundraising program. That means that even before any public announcement, development people have been talking with potential donors. The results, I believe, will be rewarding when the final amount is tallied.

I want to take this opportunity to once again congratulate the College of Agri-

culture faculty and staff for their contributions to the campaign for the Agriculture Information and Alumni Center. This campaign was the first on the Urbana-Champaign campus to ask university employees to participate in a fundraising effort. To tell the truth, there were those who didn't believe that our faculty would respond positively. They did, and we're proud of them.

In the past, the college and university have sought contributions for bricks and mortar, and we've been successful. This time, with a few exceptions (like the library), we're asking contributors to fund programs. Our goal is to increase our endowments so we can establish named professorships, scholarships, and fellowships that will continue in perpetuity. Our undergraduate JBT scholarship program, for example, is funded by a combination of cash contributions and endowment. If the cash contributions stopped, our program would suffer; however, endowment would guarantee continuity.

The college currently has approximately \$30 million in endowments—about half that in farmland. We want to double that amount and commit half to increase our undergraduate scholarship and graduate fellowship support. The other half would be dedicated to increased support for faculty teaching and research.

The College of Agriculture has a rich history and has developed a legacy of quality and worldwide leadership. I'd like to see that quality and leadership continue. And it will, with your help. ▼

On the cover: Phyllis Picklesimer listens to instructions from Richard Farnsworth as she participates in a survey that asks consumers to compare sets of vegetables from three sources—a grocery store, a farmers' market, and a local community supported farm. The weekly surveys were conducted during the summer as part of a research project to identify the primary reasons consumers are joining community supported farms (agriculture) or CSAs. Findings from the surveys will be combined with price and quantity information and from a survey of CSA participants to judge the long-term viability of this alternative market channel. The interdisciplinary evaluation is headed by College of Agriculture professors Richard Warner, Sarahelen Thompson, Richard Farnsworth, and John Juvik.



Banwart



Thompson



McBride



Olson

Wayne L. Banwart has been named assistant dean and coordinator of courses, curricula, and honors programs and **Jesse C. Thompson** has been named assistant dean and coordinator of cultural diversity programs in the Office of Academic Programs.

Banwart, a professor of soil chemistry, has been serving as associate head of the Department of Agronomy. The position became available when Warren Wessels retired.

"Following a review of the Office of Academic Programs by the college's faculty-elected Undergraduate Educational Policy committee, it became clear we needed a tenured faculty member who has experience in the college and university to take Warren's position,"

says **William L. George**, associate dean and director of academic programs. "We feel fortunate that Wayne Banwart accepted the position."

Thompson has been assistant to the dean for minority programs since 1992.

"Jesse has helped the college in so many ways," George says of Thompson. "We're pleased that his efforts have been recognized with this new title."

Banwart's responsibilities will include courses and curricula development, academic standards and student performance, some scholarship and honors programs, off-campus courses and workshops, and teaching the freshman and transfer student discovery classes.

Thompson's work will focus on cultural diversity programs with middle school, high school, and community college students as well as with the undergraduate and graduate students and faculty in the college. He will also continue his efforts in minority recruitment and retention and collaborations with 1890, Hispanic, and Native American colleges and universities as well as specialized fundraising programs.

Banwart's and Thompson's appointments were accompanied by other changes in responsibilities in the Office of Academic Programs.

Rebecca J. McBride, assistant dean and coordinator of admissions, records, and counseling, will oversee student admissions, the faculty/student advisement program, student records and handbook, student academic counseling, and the College of Agriculture Student Council as well as teaching the freshman and transfer student discovery classes with Banwart.

Charles E. Olson, assistant dean and coordinator of recruiting, career development, and placement, will continue his work in student recruitment, the JBT scholarship program for freshmen, and the community college scholarship program. He will assume responsibility for student career development and counseling, study abroad programs, and student placement. In addition, Olson will manage internships, mentorships, student work experiences, and cooperative programs for undergraduate students.

"Our curricula are changing, our recruitment programs are changing, our student body is changing, and the job market is changing," George says. "We feel these shifts in responsibilities reflect the educational needs of our college and the society we serve." ▼

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News items and articles of interest to the faculty and staff of the College of Agriculture are welcome at any time. Submit materials and/or suggestions to: AgriView, Office of the Dean, 101 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801.

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Computer facility upgraded

Significant investment by the college during the past year has kept the college's Microcomputer Facility among the best on the Urbana campus. Located in the old Ornamental Horticulture Building just east of Turner Hall, the facility includes three computer laboratories, two using IBM-based machines and one using Apple Macintoshes, according to facility director Jeana McAllister. The High Tech Lab and the Microcomputer Center have been equipped with top-of-the-line IBM-compatible workstations with 486DX40 CPUs, high-resolution monitors, CD-ROM, and sound capabilities.

"Each of the PC labs has at least 25 student machines that support multimedia applications developed by faculty for use in their courses," says network administrator **Donald Meyer**. "The computers in both labs are networked together to share common disk storage and printers."

Meyer adds that the Mac Lab is configured as a classroom outfitted with 21 Apple PowerMac student workstations. These computers are equipped with color monitors, CD-ROM drives, and sound hardware with capabilities of supporting many multimedia applications.

"The High Tech Lab, the Microcomputer Center, and the Mac Lab have been designed to provide faculty with the most up-to-date equipment possible for teaching," Meyer says. "More than a dozen courses are taught in these rooms each semester."

The leading course taught in the facility is Agricultural Economics 161, "Microcomputer Use," the foundation microcomputer applications course for students in the college.

This fall, Ag Econ 161 was able to accept only 275 of the 479 students who had enrolled, according to McAllister, who's also a teaching associate for microcomputer applications in the Department of Agricultural Economics.

"We have 11 to 14 sections each semester," McAllister explains. "About 60 percent are agriculture students, and the rest come from across campus, many in commerce or LAS."

As part of the Freshman Discovery program this year, all freshmen in the college will have three tutorials in the computer rooms. Each of these students attended a computer orientation session early in the semester as part of AG/HRFS 100. Students were given e-mail accounts and taught basic computer skills required to access the Internet via Mosaic.

During the term, they will be able to find their homework assignments on the campus backbone. They'll have to complete their assignments on computer, either in the Microcomputer Facility or from one of many other workstation on campus.

Ag Econ 161 and AG/HRFS 100, however, aren't the only agriculture courses that depend on the Microcomputer Facility.

"Several faculty will have a few classes in the labs for familiarization, then put computer-based assignments on the network for work outside of class," Meyer says.

Nearly all departments and units in the college have classes and/or homework assignments through the facility.

In addition to word processing, spreadsheets, and other basic computer applications, the microcomputer facility provides a variety of graphics programs. Because they're available on all facility machines, Meyer says, faculty can expect their students to prepare professional-looking presentations.

As a result of the facility's popularity, many of the computers that were replaced during the summer have been moved to an auxiliary laboratory on the second floor of the building. This lab offers 14 IBM-compatible and 10 Macintosh machines for general applications—wordprocessing, spread sheets, e-mail, and (when it's available) on-line registration.

"Last year we had students standing in line waiting for spaces," McAllister says. "With more classes being taught in the laboratories, we decided we needed to make more machines available for students to use."

The auxiliary lab will be open during the day when the other labs are committed to classes.

"There will always be machines for students to use outside of class," she adds. "But there's still no guarantee that all the machines won't be in use. This is a pretty popular place."

"The deans have been wonderful," McAllister says. "Dean George and Dean Gomes both recognize the importance of computers in teaching and learning."

"The college is getting a good return on its investment," she adds. "We're providing faculty and students with as much support as possible. Many students feel this is the best microcomputer facility on campus." ▼

"We've put user-friendly technology at the fingertips of the professor," **Jack Everly** says of the new high-technology seminar/conference rooms the college has outfitted.

For the past year, Everly, an associate professor of agricultural communications, has been working with **William L. George**, associate dean and director of academic programs, and **Douglas B. Bauling**, college planning engineer, to design these seminar rooms that provide faculty latest advances in modern equipment.

George received funds from the campus to equip and develop 426 Mumford Hall and 121 Turner Hall. Dean Gomes provided college funds to renovate the rooms to accommodate the multimedia equipment.

Each of these rooms is designed for interactive use with a rear-screen projector and a podium that gives the user fingertip control over the integrated system. The podium combines an Apple Power Mac computer and an IBM-compatible computer with an Elmo color video camera, a component video cassette tape player, and a slide projector.

Everything is connected to a rear-screen television projector that can display whatever the presenter chooses—from an illustration on the Elmo unit to a computer screen.

Because the computers can be connected to the campus network, they have the capability of reaching any computer in the world through the Internet. The S-VHS videotape player plays standard VHS tapes.

A video monitor tucked into the podium gives the presenter the same picture the audience sees.

"What an advantage," Everly says. "The presenter doesn't have to look back at the screen to see what he's showing. He can glance at the monitor and continue his presentation with the assurance that he knows what they're viewing."

"The Elmo presenter is the general workhorse tool," Everly says. "With its color camera and lighted copy board, it transforms printed material and transparencies into video images. With zoom and magnification capabilities, it can produce visual information not normally available in a seminar setting. It can be focused closely on charts, graphs, photos out of books, or just about anything. "It replaces an overhead or opaque projector."

Each room is also equipped with wireless audio to allow the user to move from the podium to any place in the room without losing the convenience of a microphone. Both rooms are wired for satellite delivery.

In addition to the high-tech accouterments, the rooms also have traditional teaching materials like dry-erase boards and basic slide projectors—"because slides can't always be transferred to video with the same clarity as the slides themselves," Everly says. The rear-screen projectors are equipped with new, mirror-projection lenses so the slides don't have to be put in the trays backwards.

Each room can accommodate 25 to 50 people depending on configuration.

"The rooms have been scheduled almost all day on Thursdays and Fridays for the fall semester to accommodate most discussion sections of the new discovery class, AG/HRFS 100," Everly says. "These faculty have the first opportunity to use the rooms on a regular basis."

Gomes, George, and Bauling are reviewing other college building for additional "high-tech" facilities in anticipation of future needs and demand.

"Whether computers, slides, television, the podium, or any other dimension, these tools give visualization to critical issues," Everly says. "They're valuable when words alone just don't come across."

"We can help students start thinking visually by presenting visual concepts," he adds. "Verbalization can get in the way when visualization can help the professor teach; it can stimulate thinking."

"A good visual is worth a thousand words in jump-starting critical thinking," Everly says. "Words are always more susceptible than photos to different interpretations and meanings." ▼

Jack Everly takes to the podium to demonstrate some of the innovations in the high-tech seminar room for discussion leaders from AG/HRFS 100 (left to right) David Chicoine, Rebecca McBride, Wayne Banwart, and Douglas Parrett.





While in Africa, Chancellor Aiken (right), Dean Gomes (second from right), and Associate Dean Nicholaides (left) traveled overland on several occasions. In northern Uganda Gomes and Nicholaides visited several agricultural vocational schools which are possible sites for a new agricultural university.



During their visit to Uganda, Chancellor Aiken (third from left), Dean Gomes (second from right), and Associate Dean Nicholaides (center rear) met with their counterparts at Makerere University in Kampala. The universities have agreed to collaborate on faculty and student exchange and research programs.

• Dean and chancellor visit Africa

A new institution-building project in east Africa may be on the horizon for the College of Agriculture.

Officials from the college and the university traveled to Uganda in June to return a visit by Uganda's prime minister, George Kosmas Adeybo, to the Urbana campus last January.

Chancellor **Michael Aiken**, Dean **W.R. Gomes**, and associate dean and director of the office of international agriculture **John J. Nicholaides III** traveled to Uganda in June to meet officials of the Ugandan government and Makerere University in Kampala. They returned with a memorandum of agreement with Makerere University for a 10-year program of faculty exchange, student exchange, and research cooperation.

The Uganda government invited the UI group to visit the country and explore opportunities to help develop a new agricultural university in northern Uganda. Gomes and Nicholaides traveled into the countryside to visit possible sites for the proposed institution.

The College of Agriculture has participated in similar programs in India, Sierra Leone, Pakistan, and currently in neighboring Kenya.

Long-term collaboration

"The Ugandan government would like to sign a memorandum of agreement with the University of Illinois for long-term collaboration," Nicholaides says. "They and we are now seeking funding from potential donors to support the program in which we will be involved."

Nicholaides explains that Uganda's interest in the UI started in the summer of 1993 when a Ugandan graduate student in food science participated in the INTSOY (International Soybean Program) short course on campus. He relayed his enthusiasm about the INTSOY program to Adeybo.

Adeybo visited the campus in late January to learn more about both INTSOY and the college's experience in institution building. When he returned to Uganda, he invited Aiken, Gomes, and Nicholaides to visit.

"Uganda is interested in establishing an agricultural university focusing on engineering and food science—processing and utilization," Nicholaides explains. "They're also interested in crop production."

The college is waiting word from Uganda that they're ready for a technical

team to visit the country to evaluate the situation and recommend the best way to establish a new agricultural university. The team is expected to include Nicholaides, **Thomas McCowen**, associate director of international agriculture, and four faculty.

"There are several vocational agricultural schools in northern Uganda that could be used as a foundation for a new university, much as Egerton was in Kenya," Nicholaides says. "The Ugandan government has established a task force to evaluate these choices and offer a recommendation. The UI technical team would be asked to review the government task force's report and suggest strategies to implement their plan."

While they were in Africa, the UI group also visited Kenya to evaluate the progress of the UI's project with Egerton University there.

The Institutional Development for Agricultural Training (IDAT) project at Egerton is in the final year of a long-term program of creating a comprehensive agricultural university out of a diploma-granting institution. ▼

New project in Uganda announced

The UI is part of a private-sector consortium that recently was chosen for Uganda IDEA (Investment in Developing Export Agriculture), an export development project sponsored by USAID.

The consortium is made up of three private firms along with the UI and California Polytechnic State University at San Luis Obispo.

The UI's role will be to provide short-term training programs and long-term degree programs for an expected six members of Makerere University participating in the project. The UI will also provide approximately 15 person-months of support for UI faculty to work with their Makerere University counterparts in all academic disciplines.

The agreement is for a five-year project.



Plans underway for '95 Open House

"The Place to Be" to see Linda Ladybug, Mickey Mosquito, and five of their friends will be the sixth annual College of Agriculture Open House.

Co-chair **Sandra Casserly** says early plans for the March 3-4 event include an "insect theatre" which will take a multi-faceted approach to helping teachers instruct children about entomology.

In another area, forestry will be working with veterinary medicine, agricultural engineering, and the CES natural resources management team to create a natural resource world with areas featuring wildlife, a cave, and a display of rivers and streams and prairie plants.

"These are just a few of the fresh, new displays being planned," Casserly says. "We're encouraging the 35 members of our Open House committee to get more student clubs involved in the display competition."

"And we anticipate exceeding our record crowd of 17,000 last year," she adds. "We're using just five buildings this year to make it easier for our visitors to get around to see all of the displays."

The mission of Open House is to demonstrate the diversity the college achieves through education, research, and extension. ▼



College of Agriculture retirees who attended a reception last spring gathered for a photograph on the stairs in Bevier Hall.

47 retire From College

The College of Agriculture announced the retirement of the following 47 employees, listed by years of service, during the 1993-94 academic year.

- 42 Betty Everence, program administrative assistant, Experiment Station
- 40 James McCurdy, unit leader, Warren-Henderson Extension Unit, CES
- Donald L. Teel, unit educator, crops/livestock, CES
- 38 Charlotte R. Benard, administrative aide, Dixon Springs
- 37 Edna Ruth Taylor, secretary, Animal Sciences
- Arlene Ann Wakefield, program administrative assistant, Horticulture
- Deanna Kay Taeger, secretary, International Agriculture
- 36 Warren K. Wessels, assistant dean, Academic Programs
- James R. Johnstone, physical science technical assistant, Agricultural Engineering
- 35 Marjorie A. Sohn, associate professor, clothing extension, Consumer Sciences
- Thomas D. Hinesly, professor, soil ecology, Agronomy
- 33 Mary M. Hoffman, associate professor, Cooperative Extension
- Donald L. Day, professor, structures and environment, Agricultural Engineering
- 32 Catherine Mauck, educator, community leadership & volunteerism, Mount Vernon Extension Center, CES
- 29 C. Chris Doll, educator, horticulture fruits & vegetables, Edwardsville Extension Center, CES
- Martin M. Meyer Jr., professor, nursery management, Horticulture
- 27 Alice D. Ledbetter, secretary, Dixon Springs
- Ward G. McGowan, farm foreman, Dixon Springs
- James C. Pennell, crops testing technician, Agronomy
- 26 Kenneth S. Todd, professor, parasitology, Veterinary Research and Extension
- Melvin M. Wagner, associate professor, economic development, Agricultural Economics
- 25 Marilyn S. Cobbs, educator, prevention education, CES
- Genevieve L. Handke, program administrative assistant, Agricultural Economics
- 24 Vera Irvin, secretary, Hamilton-Wayne-White Extension Unit, CES
- R. David McQueen, professor, animal nutrition and mastitis, Veterinary Research and Extension
- 23 Harriett Busen, secretary, Macoupin County Extension Unit, CES
- Jerry W. Robinson Jr., professor, rural sociology, Agricultural Economics
- 22 Arthur J. Siedler, professor, biochemistry of antimicrobial agents, Food Science
- 20 Phyllis J. Burnett, bindery worker, Agricultural Communications and Education
- M. Malinda McClure, educator, community leadership & volunteerism, Effingham Extension Center, CES
- 19 Robert D. Richards, herder, Animal Sciences
- 17 Tzu-Suan Chu, research specialist, insect behavior and ecology, Agricultural Entomology
- 16 Shirley Laley, secretary, Moultrie-Douglas Extension Unit, CES
- Dorothea Grider, secretary, Agricultural Entomology
- William C. Wagner, professor, physiology, Veterinary Research and Extension
- 15 S. Josephine Ferguson, clerk typist, Experiment Station
- B. Sharon Garrelts, educator, youth development, Kankakee Extension Center, CES
- Clara Gluck, work program participant, Peoria County Extension Unit, CES
- 11 Bettie Lewis, secretary, Whiteside-Rock Island Extension Unit, CES
- 10 Betty Burton, secretary, Illinet, CES
- 9 Treva T. Walker, extension unit leader, Tazewell County Extension Unit, CES
- 7 Carole Dreyer, secretary, Lake County Extension Unit, CES
- Mary Neuhoﬀ, secretary, Dupage County Extension Unit, CES
- Sharon Schuh, work program participant, Peoria County Extension Unit, CES
- 5 Ruth Hedstrom, secretary, Peoria County Extension Unit, CES
- 4 James C. Drake, educator, urban leadership, Region III, CES
- 3 Lorene Riley, secretary, Region III, CES ▼

1994 faculty promotions

9 new faculty appointed

Twelve faculty in the College of Agriculture were promoted effective with the beginning of the academic year on August 21, 1994. They are:

To professor:

Steven R. Eckhoff, Department of Agricultural Engineering

Richard L. Mulvaney, Department of Agronomy

Harris A. Lewin, Department of Animal Sciences

Douglas F. Parrett, Department of Animal Sciences

Ion C. Baianu, Department of Food Science

John A. Juvik, Department of Horticulture

To associate professor:

Donald G. Bullock, Department of Agronomy

Kevin H. Kline, Department of Animal Sciences

Kenneth W. Koelkebeck, Department of Animal Sciences

Mary S. Brewer, School of Human Resources and Family Studies

Susan M. Potter, School of Human Resources and Family Studies

Darin M. Eastburn, Department of Plant Pathology ▼

Nine new faculty members joined the College of Agriculture this fall. They are:

Nicholas W. Minot, Department of Agricultural Economics; visiting assistant professor, economics of agricultural development and international comparative agriculture; Ph.D., Michigan State University.

Andrew F. Bent, Department of Agronomy; assistant professor, plant molecular genetics and biology; Ph.D., Massachusetts Institute of Technology.

Stephen E. Hart, Department of Agronomy; assistant professor, weed science; Ph.D., Michigan State University.

Michelle M. Wander, Department of Agronomy; assistant professor, soil fertility and mineral nutrition; Ph.D., Ohio State University.

David Miller, Department of Animal Sciences; assistant professor, biochemistry and molecular biology of mammalian fertilization and early development; Ph.D., University of Wisconsin-Madison.

Danilo Chinea, Department of Forestry; assistant professor, forest ecology; Ph.D., Cornell University.

Martin Christ, Department of Forestry; visiting assistant professor, forest ecology; Ph.D., Rutgers University.

Timothy A. Garrow, School of Human Resources and Family Studies; assistant professor, nutrition/biochemistry; was postdoctoral research associate, University of California.

Joseph H. Pleck, School of Human Resources and Family Studies; associate professor, clinical psychology; was senior research associate, Center for Research on Women, Wellesley College, Massachusetts. ▼

The Miles C Hartley Selections Garden was dedicated with a garland-cutting ceremony on September 16. Participants (left to right) were Chapin Rose, student trustee; Judith Zuk, president, American Association of Botanical Gardens and Arboreta; Anton G. Endress, Department of Horticulture; Susan Gravenhorst, UI Board of Trustees; Chancellor Michael Aiken; State Representative Laurel Prussing; Dean W.R. Gomes; Nona Wolfram-Koivula, executive director, National Garden Bureau; Kenneth Boyle, UI Board of Trustees; UI President Stanley Ikenberry. The Hartley garden, constructed with funds from a bequest of Miles C Hartley, a UI graduate and faculty member from 1948 to 1962, is part of a planned 160-acre UI Arboretum that will eventually include woodland, savanna, and wet-prairie ecosystems. The entire arboretum will be funded with private gifts and grants.





Recognition Awards were J. Kent Mitchell, Department of Agricultural Engineering; Robert A. Easter, Department of Animal Sciences; and Hans P. Blaschek, Department of Food Science.



Winners of the 1994 Faculty Awards of Excellence are (front row) Michael E. Gray, Office of Agricultural Entomology, and Carroll E. Goering, Department of Agricultural Engineering; (back row) Bryan A. White, Department of Animal Sciences; Laurie Kramer, Division of Human Development and Family Studies; Constantin A. Rebeiz, Department of Horticulture; Jerry W. Robinson Jr., Department of Agricultural Economics.

• College Awards

Three faculty members received Paul A. Funk Recognition Awards at the college's annual recognition banquet on Tuesday, March 29, 1994. The awards were presented to **Hans P. Blaschek**, Department of Food Science, **Robert A. Easter**, Department of Animal Sciences, and **J. Kent Mitchell**, Department of Agricultural Engineering.

Presented annually for outstanding professional achievement and major contributions to the betterment of agriculture, the Funk Awards are supported by the Paul A. Funk Foundation of Bloomington.

Blaschek is recognized for research on *Clostridium perfringens*, the third-ranked cause of food poisoning in the U.S. His studies on the genetics of toxin production promise to be valuable in understanding the mechanism of toxicity and in controlling the bacteria in the food supply. Blaschek is also conducting long-term research designed to produce microbes that can be used to make fuel from low-value renewable resources.

Easter is a premiere swine nutritionist whose work has helped solve major industry problems and is leading the way in new techniques that will influence the industry of the future. He is investigating nutritional and physiological factors affecting the post-weaning performance

of pigs and the use of crystalline amino acids as supplements to swine diets. He is also developing models to predict amino acid requirements of pigs in different environments.

Mitchell is recognized for his work in soil erosion mechanics, and he recently extended his research to the broader issue of water quality. His research has significantly influenced understanding of the erosion process. His most recent work has dealt with the complicated issue of monitoring and modeling nutrient and pesticide contamination on a complete watershed.



Six faculty members were presented College of Agriculture Faculty Awards for Excellence. The awards recognize outstanding professional achievement and demonstrated excellence in teaching, research, or extension.

The recipients were **Jerry W. Robinson Jr.**, Department of Agricultural Economics, **Michael E. Gray**, Office of Agricultural Entomology, **Carroll E. Goering**, Department of Agricultural Engineering, **Laurie Kramer**, Division of Human Development and Family Studies, **Constantin A. Rebeiz**, Department of Horticulture, and **Bryan A. White**, Department of Animal Sciences.

Robinson received the Senior Faculty Award for Excellence in Extension. He was cited for developing and implementing comprehensive programs focused on educating others to improve their own well-being and the communities in which they live as well as for developing the nationally recognized program "Helping Rural Communities Prepare for Economic Development."

Gray was presented the Young Faculty Award for Excellence in Extension in recognition of his pioneering work in on-farm participatory research that includes extensive on-farm corn rootworm management trials that are being used in other corn-producing states to show that soil insecticide rates can be reduced.

Goering received the Senior Faculty Award for Excellence in Teaching. An outstanding educator and textbook author, Goering has received numerous teaching awards. His first textbook is used in more than 20 major universities in the U.S. and abroad, and his second textbook has been adopted by more than six universities.

Kramer, who received the Young Faculty Award for Excellence in Teaching, was cited as a pioneer in developing innovative teaching strategies, creating "teachable moments," engaging students, and bringing alive the kinds of



1994 Academic Professional Awards of Excellence recipients were (front row) Jeana L. McAllister, Department of Agricultural Economics, and Robin K. Cowen, Department of Horticulture, and (back row) William T. McNamara, Cooperative Extension Service, and Sandra R. Casserly, Office of Agricultural Communications and Education.



David J. Wehner (right), Department of Horticulture, was presented the 1994 Karl E. Gardner Outstanding Undergraduate Adviser Award and Marvin C. Carbonneau (right), Department of Horticulture, was presented the 1994 John Clyde and Henrietta Downey Spittler Teaching Award.

hands-on and group activities that are lauded in teaching textbooks.

Rebeiz was presented the Senior Faculty Award for Excellence in Research. He is internationally recognized for his pioneering research in chlorophyll and porphyrin biochemistry. His work includes the discovery of photodynamic herbicides and porphyrin insecticides and the discovery and patenting of 150 photodynamic herbicide and 25 insecticide modulators.

White was presented the Young Faculty Award for Excellence in Research. His research program focuses on improving digestion in ruminant animals. He has been an invited scholar to the United Kingdom, Australia, and other countries, and scholars from throughout the world visit his laboratory.



Four academic professional staff members in college were presented Academic Professional Awards for Excellence.

Sandra R. Casserly, Office of Agricultural Communications and Education, and **William T. McNamara**, Cooperative Extension Service,

were recognized for sustained excellence. **Robin K. Cowen**, Department of Horticulture, and **Jeana L. McAllister**, Department of Agricultural Economics, were cited for innovation and creativity.

Casserly developed programming service for a six-state network of 11 commercial television stations and two cable networks; created, produced, and hosted a weekly series of television programs; and produced and hosted more than 4,100 daily radio programs for 50 stations.

Cowen was cited for her effective teaching efforts, her novel and creative approaches to providing technical knowledge, her exceptional ability to attract large numbers of students into her courses, and her innovative and artful manner that fully engages her students.

McAllister was recognized for bringing microcomputers to the faculty, students, and staff of the College of Agriculture in an innovative and creative manner as director of the college's microcomputer facility.

During CES Revitalization McNamara coordinated all hiring

activity which involved more than 500 applications for more than 200 positions that were open to internal candidates. He also counseled with each staff member and worked to buoy up the morale by conducting "caring for colleagues" workshops throughout the state.



David J. Wehner, Department of Horticulture, was presented the Karl E. Gardner Outstanding Undergraduate Adviser Award, and **Marvin C. Carbonneau**, Department of Horticulture, was presented the John Clyde and Henrietta Downey Spittler Teaching Award.

Wehner was cited as a dedicated, effective, generous, and unstinting student adviser who gives his time and energies to improve the educational, professional, and social experiences of undergraduate students. He also helps students find summer jobs and assists in permanent placement. The award was established by George R. and Arthur H. Bunn of the Bunn-O-Matic Corporation of Springfield to honor Karl Gardner, a former associate dean and director of resident instruction in the college.



M. Gene Oldham, Department of Agronomy, received a Chancellor's Academic Professional Excellence Award in recognition of demonstrated excellence on the Urbana-Champaign campus. He has been superintendent of the Agronomy/Plant Pathology South Farm since 1965, and he supervises the operation of the Morrow Plots, the oldest continuously operating field experiment in the United States.



Janet Utterback, administrative aide to the dean of the College of Agriculture, received a Chancellor's Distinguished Staff Award in March for her contributions to the University of Illinois at Urbana-Champaign.

Carbonneau was cited for typifying teaching excellence with an enthusiastic style that has inspired more than one generation of students who have become leaders of the floriculture industry in Illinois and across the nation. He is acclaimed for his ability to present information in positive ways and for encouraging students to improve. The award was established by Mildred Spitler Johnson of Urbana in honor of her parents. Her father was associate director of extension at the UI when he retired in 1949.

Douglas F. Parrett, Department of Animal Sciences, was presented the campus Harriet and Charles Luckman Distinguished Undergraduate Teaching Award at the Instructional Awards Banquet in April.

Brenda J. Cude, Division of Consumer Sciences, was one of 13 nationwide leaders in consumer issues selected to participate in the National Association of Insurance Commissioners 1994 Consumer Participation Program. NAIC sponsors programs to promote consumer activity and representation in their deliberations.

Mary Ann L. Smith, Department of Horticulture, was selected as U.S. correspondent for the International Association of Plant Tissue Culture. She represented the U.S. at the council of correspondents at the International Association of Plant Tissue Culture Congress in Florence, Italy, in July.

The Department of Agricultural Engineering was rated number one in the country by a survey of college of engineering deans as reported in the March 21, 1994 issue of *U.S. News and World Report*. Cornell, Purdue, and Texas A&M were tied for second followed by the University of California.

Gary J. Kling, Department of Horticulture, received the UIUC Award for Excellence in Extramural Teaching. He received the award at a banquet in late April.

David H. Baker, Department of Animal Sciences, received the Morrison Award from the American Society of Animal Science for his work in animal nutrition and metabolism. The

award is the highest honor given by the ASAS.

Jimmy H. Clark, Department of Animal Sciences, received the American Feed Industry Association Award in ruminant nutrition research at the annual meeting of the American Society of Animal Science on July 14 in Minneapolis.

Upson S. Garrigus, professor emeritus in animal sciences, was honored with the Dean Claude Bouffault Memorial Award from the American Society of Animal Science for his scientific contributions to international agriculture.

Anita A. Povich and Robert G. Hays, Office of Agricultural Communications and Education, received Awards of Excellence from the Agricultural Communicators in Education at their annual conference July 16-20 in Moscow, Idaho. Povich was recognized for her work in publication, and Hays was acknowledged for building the UI agricultural communications teaching program.

James F. Evans, Office of Agricultural Communications and Education, was presented the ACE Professional Award by the Agricultural Communicators in Education. He was cited for professional accomplishment, the impact of his communications efforts, contributions to agriculture, and service to ACE.

Paul C. Harrison, Department of Animal Sciences, was awarded the 1994 Poultry Science Association Animal Welfare Award based on original research in nutrition, pathology, physiology, and related areas over the past five years. ▼

Research programs in the College of Agriculture are enhanced considerably by gifts and grants from state and federal agencies and private organizations. In recent months, numerous new projects have been started throughout the college, including the following:

James E. Appleby, forestry: \$12,610 for 7 months from USDA for "Training and public awareness video—oak wilt disease in the north central states."

Janice M. Bahr, animal sciences: \$4,000 for 12 months from National Science Foundation for "Regulation of ovulation in the domestic hen."

Janice M. Bahr and Jane A. Jackson, animal sciences: \$79,000 for 18 months from National Science Foundation for "Regulation of ovulation in the domestic hen."

Wayne L. Banwart, agronomy: \$45,000 for 10 months from Argonne National Laboratories for "Field evaluation of plant uptake of explosives from soil."

Kevin L. Barber, agronomy: \$13,047 for 15 months from Illinois Department of Agriculture for "Phosphorus and potassium fertilization of corn grown in residue-free rows" and \$8,469 for 12 months from Fluid Fertilizer Foundation for "Fertilization of corn grown in strip-tilled rows."

Peter J. Barry, agricultural economics: \$89,124 for 12 months from USDA for "Center for farm and rural business finance."

Peter J. Barry and Bruce J. Sherrick, agricultural economics: \$24,040 for 3 months from Farm Credit Administration for "Stress study of agricultural real estate loans."

Andrea H. Beller and Jeffrey S. Gray, consumer sciences: \$10,000 for 9 months from National Commission for Employment Policy for "The role of discrimination on the employment and income trends of minorities."

Frederick E. Below Jr., agronomy: \$47,778 for 15 months from Illinois Department of Agriculture for "Sources and forms of nitrogen for optimum corn production."

Richard L. Bernard, agronomy: \$60,000 for 48 months from Identity Seed & Grain Company for "research agreement."

James J. Betustak, cooperative extension: \$34,456 for 12 months from Lake County Department of Planning for "Lake County, Illinois community develop block grant."

Hans P. Blaschek, food science: \$408,331 for 36 months from U.S. Army Medical Research & Development Command for "Toxin production and virulence in *Clostridium perfringens*."

M. Susan Brewer, foods and nutrition: \$6,935 for 12 months from National Pork Producers Council for "Effect of light, alpha tocopherol, and display in frozen storage time on color and lipid oxidation of lean pork."

Sandra L. Brown, forestry: \$8,000 for 13 months from USDA for "Long-term dynamics of forest stands in Illinois."

Stephanie W. Brown, forestry: \$44,000 for 10 months from Illinois Department of Conservation for "Continuing assistance and resource education."

Vernon R. Bryant, cooperative extension: \$157,600 for 12 months from Chicago Planning and Development for "Urban gardening/neighborhood gardening."

Donald G. Bullock, agronomy: \$32,738 for 15 months from Illinois Department of Agriculture for "Evaluation of the Minolta Spad 520 chlorophyll meter for on-farm N management of corn in Illinois."

Bruce M. Chassy, food science: \$10,000 for 12 months from Food & Drug Administration for "Technical advisory support from the University of Illinois."

Munir Cheryan, food science: \$45,000 for 12 months from USDA for "Nonfouling ceramic membranes for treatment of fuel ethanol stillage"; \$170,000 for 36 months from Illinois Corn Marketing Board for "continuous fermentation with osmo/thermo tolerant yeast: scale up and economics"; \$98,000 for 24 months from A.E. Staley Manufacturing Co. for "Microfiltration of saccharification liquor."

Poo Chow, forestry: \$41,388 for 12 months for "Durability of softwood crossties" and \$14,983 for 12 months for "Fatigue life of woods," both from Association of American Railroads.

Leslie L. Christianson, agricultural engineering: \$67,486 for 12 months from U.S. EPA for "Application of pollution prevention techniques to reduce indoor air emissions from aerosol consumer products" and \$47,369 for 12 months from Center for Indoor Air Research, Inc. for "Air and contaminant flow study for improving design of partitioned office rooms."

Leslie L. Christianson, Gerald L. Riskowski, and Steven E. Ford, agricultural engineering: \$16,000 for 12 months from National Pork Producers Council for "Effects of pen partitions and feeders on air velocities and air quality."

Jimmy H. Clark, animal sciences: \$57,342 for 12 months from Ajinomoto Co., Inc. for "Performance of lactating dairy cows fed rumen protected methionine and lysine."

Roger L. Courson, vocational agriculture: \$1,436 for 4 months from Illinois Board of Education for "District IV agricultural education field advisor support."

Jeffrey O. Dawson, forestry: \$1,400 for 12 months from Purdue University for "An integrated solution to marginal land farming: use A farms, valued industries, and power utilities."

Sharon M. Donovan, foods and nutrition, **Jack Odle**, animal sciences, and **Terry Hatch**, College of Medicine: \$150,123 for 12 months from U.S. Public Health Service for "Insulin-like growth factors in intestinal development."

John W. Dudley and Torbert R. Rocheford, agronomy: \$98,774 for 12 months from Midwest Plant Biotechnology Consortium for "Use of molecular markers to enhance value of corn grain for alcohol production. . ."

Larson B. Dunn, food science: \$50,000 for 24 months from American Soybean Association for "Expanded research and development of soybean-based wood adhesives for the purpose of commercialization."

Stephen A. Ebelhar, agronomy: \$22,641 for 15 months from Illinois Department of Agriculture for "Tillage and potassium placement effects on potassium use efficiency in a corn-soybean rotation."

George C. Fahey, animal sciences: \$2,163 for 12 months from E.I. DuPont de Nemours for "Sample analysis."

Herbert R. Fruhwirth, cooperative extension: \$6,600 for 12 months from City of Joliet for "Cooperative agreement City of Joliet neighborhood housing education program."

Karen R. Gehrt, Mary A. Fugate, and Jimmy L. Shonkwiler, cooperative extension: \$5,000 for 12 months from City of Champaign for "Money management for families."

George Z. Gertner, forestry: \$66,516 for 1 month from U.S. Army Construction Engineering Research Engineering Research Laboratory for "Discovering ecological relationships in the LCTA database: an artificial intelligence approach."

Marjorie R. Hamann, cooperative extension: \$325,000 for 12 months from Illinois Adult Vocational Education for "Consumer and homemaking education program for Illinois disadvantaged families."

Michael C. Hirschi and Ellyn I. Bromberg, agricultural engineering: \$2,275 for 12 months from Northern Illinois Water Corporation for "The Vermilion watershed protection program."

Robert G. Hoeft and Emerson D. Nafziger, agronomy: \$4,142 for 3 months from Illinois Groundwater Consortium for "Evaluation of the effect of starter fertilizer on the fallow syndrome resulting from flooded soils."

Robert G. Hoeft, Emerson D. Nafziger, and Wayne L. Banwart, agronomy: \$85,105 for 15 months from Illinois Department of Agriculture for "Determination of the effect of starter fertilizer on no-till corn in Illinois."

Donald A. Holt, experiment station: \$12,390 for 4 months from USDA for "Research apprenticeship program for minority high school students."

Robert H. Hornbaker, Donald G. Bullock, and Clarence J. Kaiser, agricultural economics: \$92,994 for 24 months from USDA for "On farm adaptation of integrated crop and livestock systems in Illinois."

Theodore Hymowitz and Krishna P. Kollipara, agronomy: \$152,396 for 36 months from Illinois Soybean Program Operating Board for "Placing molecular, biochemical, pathological, and morphological markers of the soybean genome map."

Rafael Jimenez-Flores, food science: \$31,500 for 24 months from American Dairy Association for "Rapid evaluation of freshness and protein quality in milk."

Keith W. Kelley, animal sciences: \$178,095 for 12 months from U.S. Public Health Service for "Hormonal restoration of a functional thymus during aging."

Barbara P. Klein, foods and nutrition: \$24,400 for 12 months from Illinois Soybean Program Operating Board for "High soy protein products for disease risk reduction."

Robert J. Lambert and D. Eugene Alexander, agronomy: \$80,476 for 24 months from E.I. DuPont De Nemours for "High oil corn research agreement."

Reed W. Larson, human development and family studies: \$20,750 for 12 months from U.S. Public Health Service for "Daily experience and mental health of youth at risk."

Donald K. Layman, human resources and family studies: \$15,340 for 9 months from Illinois Department of Children and Family Services for "Grants for professional development fund and center and home accreditation."

Donald K. Layman and Sharon M. Donovan, foods and nutrition: \$136,458 for 12 months from U.S. Public Health Service for "Recovery from growth retardation: anabolic responses."

Harris A. Lewin, animal sciences: \$120,052 for 12 months from U.S. Public Health Service for "Host mechanisms of resistance to blv infection."

David A. Lins, agricultural economics: \$40,000 for 12 months from Illinois Farm Development Authority for "Illinois farm and agri-industry finance research program."

J. Bruce Litchfield and John F. Reid, agricultural engineering: \$35,000 for 12 months from U.S. Food and Drug Administration for "Flexible plastic seal defect detection."

Michael J. Mainz, agronomy: \$23,976 for 15 months from Illinois Department of Agriculture for "The effect of four P & K rates on the drawdown and buildup of soil test layers"; \$59,433 for 25 months from Illinois Soybean Program Operating Board for "Densities and herbicide rates for no-till drilled soybeans."

Thomas A. McCowen and John W. Santas, international agriculture: \$246,000 for 15 months from U.S. Agency for International Development for "Proposal for extension of IDAT project (mission to Kenya)."

Thomas A. McCowen, international agriculture: \$75,400 for 5 months from U.S. Agency for International Development for "Amendment to contract between Egerton University and UIUC."

Robert H. McCusker, animal sciences: \$25,000 for 12 months from American Heart Association for "Cell type and development aspects of insulin-like growth factor binding protein expression in the heart."

Robert H. McCusker and Jan E. Novakofski, animal sciences: \$10,000 for 15 months from Illinois Pork Producers Association for "Prediction of swine growth potential using serum levels of an insulin-like growth factor binding protein."

Neal R. Merchen, animal sciences: \$51,706 for 24 months for "Optimizing best processing of whole soybeans for feeding to ruminants: effects of extrusion" and \$40,384 for 12 months for "Evaluation of roasted whole soybeans as a source of amino acids for ruminants and development of laboratory tests to monitor effect," both from Illinois Soybean Program Operating Board.

Ignacy Misztal, animal sciences: \$105,044 from Holstein Association of America for "Prediction error variance and restricted maximum estimation with large-scale animal models."

Mary K. Munson, cooperative extension: \$2,933 for 6 months and \$14,970 for 3 months from Lt. Governor's Office for "Serve Illinois: youth in action."

Cecil D. Nickell, agronomy: \$85,548 for 36 months from Illinois Soybean Program Operating Board for "Generation advance and field evaluation of soybean breeding lines."

Toshiro Nishida and Hiro I. Nishida, food science: \$143,300 for 12 months from U.S. Public Health Service for "Role of plasma lipoproteins in atherosclerosis."

Jan E. Novakofski, animal sciences: \$200,000 for 18 months for "Development of an ultrasound-based grading system" and \$100,418 for 12 months from USDA for "Beef carcass evaluation and identification: development of an ultrasound-based grading system."

Jack Odle, animal sciences: \$15,000 for 12 months from National Pork Producers Council for "Enhancement of medium-chain triglyceride utilization by neonatal piglets" and \$10,000 for 15 months from Illinois Pork Producers Association for "Grain length specificity of milk and digestive tract lipases during early postnatal development of the piglet."

Kenneth R. Olson, agronomy: \$5,000 for 10 months from Illinois Department of Revenue for "Determining the crop yield potential of new Illinois soil types."

Edward W. Osborne, agricultural communications and education: \$1,026 for 4 months from Illinois Board of Education for "1994 aged supplemental funds."

Edward W. Osborne, agricultural communications and education, and **Philip Buriak**, agricultural engineering: \$23,000 for 6 months from Illinois Board of Education for "FSAA II development—phase two."

Jerald K. Pataky, plant pathology: \$11,800 for 12 months from Midwest Food Processors Association, Inc. for "Improving disease resistance in sweet corn."

Margaret M. Patten and Donald K. Layman, human development and family studies: \$96,030 for 12 months from Illinois Department of Children and Family Services for "Staff development coordinator of Illinois CCR&R system."

Earl B. Patterson, agronomy: \$50,000 for 60 months from USDA for "Maize genetic stocks evaluation and computerization."

Lyle E. Paul, agronomy: \$6,710 for 15 months from Illinois Department of Agriculture for "Nutrient placement and movement under zero-till conditions."

Jack D. Paxton, plant pathology: \$5,000 for 12 months from North Central Soybean Research Program for "Molecular techniques for management of phytophthora root rot."

Theodore R. Peck, agronomy: \$28,497 for 15 months from Illinois Department of Agriculture for "Twice monthly field soil sampling for soil testing to evaluate reproductibility of soil test levels."

Geraldine G. Peeples, Marjorie R. Hamann, and James D. Oliver, cooperative extension: \$315,000 for 12 months from Illinois Board of Education for "Parent readiness education program for low income single parents and homemakers (PREP)."

Edward G. Perkins, food science: \$15,000 from Food & Drug Administration for "Characterization of non-volatile oxidation products resulting from edible oil processing."

Susan M. Potter and Mary R. Larson, foods and nutrition: \$12,000 for 12 months from American Heart Association for "Effect of dietary protein sources on the development of lipid metabolism."

Suzanne M. Purnell, human development and family studies: \$4,606 for 9 months from Illinois Department of Aging for "Senior series workshops."

A. Lane Rayburn, agronomy: \$49,999 for 24 months from Illinois Groundwater Consortium for "The clastogenic potential of five herbicides found in Illinois groundwater."

Jerry W. Robinson, agricultural economics: \$20,000 for 8 months from Governor's Rural Affairs Council for "Helping rural communities prepare for economic development."

Torbert R. Rocheford, agronomy, and **Donald G. White**, plant pathology: \$80,000 for 12 months from USDA for "Identification of molecular markers associated with genes for preharvest resistance in corn to aspergillus flavus and. . ."

Torbert R. Rocheford, agronomy: \$114,487 for 12 months from USDA for "Specialty corn hybrids—RFLP and RAPD marker mapping of genes controlling relevant chemical. . ."; \$20,000 for 24 months from Pioneer Hi-Bred International Inc. for "Specialty corn hybrids—RFLP and RAPD marker mapping of genes controlling relevant chemical and physical corn kernel traits."

Gary L. Rolfe, forestry: \$10,000 for 6 months from Illinois Department of Conservation for "A study to assess the opportunities for forestry consultants in Illinois."

Jane A. Scherer, cooperative extension: \$127,892 for 12 months from Illinois Environmental Protection Agency for "Cook County/Englewood environmental protection lot reclamation project."

Shelly J. Schmidt, foods and nutrition: \$12,486 for 36 months from USDA for "Water mobility and image analysis measurements in model food systems"; \$2,500 for 7 months from The Academy of Applied Science for "Apprenticeship program."

Neil F. Shay, food science: \$30,000 for 24 months from International Life Science Nutrition Foundation for "Gene expression in the rat brain during appetite regulation and zinc-deficiency-induced anorexia."

Nicholas J. Smith-Sebasto, forestry: \$12,518 for 6 months from Illinois Board of Education for "Environmental education in Illinois: a teacher survey."

Joseph W. Stucki, agronomy: \$40,982 for 15 months from Illinois Department of Agriculture for "Continued studies of the effects of iron oxidation state on the fate and behavior of potassium in soils."

William C. Sullivan, horticulture: \$20,690 for 12 months for "Communicating environmental change; computer simulation and environmental impact statements" and \$165,000 for 12 months for "Environmental extension network" both from U.S. EPA; \$50,000 for 12 months from Illinois Department of Commerce and Community Affairs for "Casting the net: manufacturers, competitiveness and the environmental extension network."

Sarahelen R. Thompson, experiment station: \$10,000 for 12 months from Kellogg Foundation for "A conference on conflict resolution and shared visioning."

Christine M. Todd and Marjorie E. Mead, cooperative extension: \$21,234 for 7 months from Day Care Action Council of Illinois for "School-age network."

John C. van Es, agricultural economics: \$10,270 for 7 months from Lt. Governor's Office of Volunteer and Senior Action for "NCS regional meetings."

Lila O. Vodkin, agronomy: \$97,466 for 36 months from Illinois Soybean Program Operating Board for "Expression of flavonoid pathways genes in soybean."

Charles R. Vossbrinck, agricultural entomology: \$136,487 for 12 months from U.S. Public Health Service for "Comparative rDNA analyses of aids-related microsporidia."

Richard E. Warner, experiment station: \$177,491 for 12 months from USDA for "Intensive commercial aquaculture research and demonstration project."

Richard E. Warner and Barbara Broussard, forestry: \$50,000 for 12 months for "Illinois furbearer investigations—Illinois badger studies" and \$34,800 for 12 months for "Cooperative furbearer research—red fox studies," both from Illinois Department of Conservation.

Richard E. Warner, forestry: \$79,200 for 12 months from Illinois Department of Conservation for "Upland wildlife project."

Karl E. Weingartner, Wilmot B. Wijeratne, and Kukiat Tanteer-atarm, international agriculture: \$1,000,000 for 15 months from U.S. Agency for International Development for "Soybean utilization cooperative technical assistance program"; \$19,910 for 6 months from Illinois Soybean Program Operating Board for "Promotion of soybean utilization in El Salvador and Ecuador."

Matthew B. Wheeler, animal sciences: \$8,000 for 12 months from Illinois Pork Producers Association for "Analysis of milk proteins and genetic markers for milk proteins in Meishan sows" and \$718,979 for 36 months from Biotechnology Research and Development Consortium for "Modification of the tumor necrosis factor alpha gene in swine: production of chimeric transgenic pigs."

Jack M. Widholm, agronomy, and **Lynn E. Gray**, plant pathology: \$113,060 for 36 months from Illinois Soybean Program Operating Board for "Toxin purification and in-vitro selection for brown stem rot resistance."

Jack M. Widholm, agronomy, and **Donald G. White**, plant pathology: \$118,957 for 12 months from USDA for "Studies to reduce the aflatoxin problem in corn."

Wilmot B. Wijeratne, international agriculture: \$12,133 for 1 month from De Smet Rosedowns, Ltd., for "Test the performance of De Smet Rosedowns mini 200 oil screw press."

David J. Williams, horticulture: \$55,000 for 24 months from Illinois Department of Energy and Natural Resources for "University of Illinois, SENR and CCRC food waste processing pilot facility." ▼

Grants top \$14 million

Grants to the College of Agriculture amounted to slightly more than \$14.1 million for fiscal year 1994 that ended June 30. The amount is based on proposals for which the sponsor made a decision between July 1, 1993, and June 30, 1994, and for which the request starting date was no earlier than January 1, 1993.

The campus totals for the year were more than \$189.7 million. The College of Agriculture had the fourth highest total behind the College of Engineering with \$57.2 million, College of Liberal Arts & Sciences with \$34 million, and the National Center for Supercomputing Applications with \$21 million.

College has share of \$1 billion campaign

The College of Agriculture's share of the recently announced \$1 billion University of Illinois Capital Campaign is \$75 million. The campaign will cover eight years starting in 1991. Development people on campus have been working since then on what they call a "quiet phase" that's designed to establish a solid beginning before a publicly announced fund drive begins. "While it's being called a billion dollar campaign, it's not intended to raise a billion dollars in new money,"

explains **Lynette Marshall**, director of the college's office of resource development. "But it is designed to raise a total of at least \$1 billion over the life of the project."

The college's priorities include completing the campaign for the College of Agriculture Information and Alumni Center, endowing chairs, maintaining and enhancing academic programs, providing students with financial aid, supporting departmental needs for laboratories and equipment, and renovating and remodeling existing facilities.

Marshall explains that the college would like to have the new contributions come in the form of endowments that can fund programs over a long period of time. A \$25,000 gift, for example, can provide \$1,250 in scholarship funds annually while a larger gift of \$1.25 million can endow a chair in perpetuity.

"We want to be able to establish long-term programs that don't rely on annual support," Marshall adds. "We'd like our programs to be self-sustaining."

Over the years the college has received several farms as gifts. The college's farmland endowments are currently

valued at approximately \$15 million, which supports a variety of programs that benefit faculty and students.

Marshall points out that approximately one-third of the college's fundraising goal is made up of unrestricted gifts and grants faculty receive for their research programs.

"We'd like to establish a program similar to the Academy of Teaching Excellence which will encourage and recognize charitable support for research," Marshall says. "These dollars are raised by individual faculty members, and we're working to help them encourage gifts supporting research." ▼

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